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ORIGINAL DEPARTMENT.

LECTURE.

THE RATIONAL TREATMENT OF TYPHOID FEVER.

A DIDACTIC LECTURE DELIVERED AT THE MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.

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Reported by BERNARD M. GOLDBERG, M. D.

GENTLEMEN: To-day I propose to speak to you somewhat at length upon the rational treatment of typhoid fever.

You will constantly hear from your patients and friends that Doctor So and So, generally naming a homœopath, prevented Mr. Jones or Smith from getting the typhoid fever; or, in other words, cut the attack of the so-called fever short. Now, this is an error, showing ignorance on the part of the physician of the pathology and nature of the disease.

Typhoid fever is a blood disease, due to a specific poison introduced into the system, from either the dejections of typhoid fever patients or decaying animal or vegetable matter, which poisons the blood, and the disease must run a certain course in the person so infected, and the attack cannot, at present, by any known remedial agents be aborted.

Your position in treating this disease should be that of the skilfull physician, whose duty it is to guide his patients through the attack until the fever runs its course, treating symptoms and complications which from their severity endanger the life of the patient.

In order to simplify the study of the treatment of this important and common disease, I shall discuss it under four divisions, as follows:

1. General management of the patient.
2. The use of medicines.
3. Stimulants.
4. Baths.

1. *General Management of Patients.*—If you wish to treat this disease intelligently and successfully, your success will largely depend upon the importance you attach to the general management of the case. Indeed, many cases recover by giving careful attention to the management of the patient, with scarcely any medication.

Just as soon as you are satisfied that your patient has the disease, you order him to bed. This he must keep until convalescence is fully established. Under no circumstances should he be allowed to rise, as fatal syncope may occur from sudden cardiac failure. The room in which the patient is to remain should be large, well-lighted, airy, and away from the noise of the street. Plenty of fresh air should at all times be freely admitted, but an equal temperature of the room should be maintained. The attendant should be reliable, intelligent, cheerful, and agreeable to both patient and attending physician. The diet, for fear of increasing the already inflamed mucous membrane of the alimentary canal, should be restricted to plain, easily digested and assimilated, unirritating food. Milk is by far the best food for this disease. This may be given almost *ad libitum*. I usually order two quarts in twenty-four hours. If curds appear in the stools, lime water should be added to the milk with a view of preventing this. From one to four tablespoonfuls

may be added to every tumblerful of milk. Beef, chicken, and mutton broths are agreeable and highly nutritious. These must not be given exclusively nor too freely, as troublesome diarrhœa may ensue. Beef tea should be so made that one pint represents one pound of lean beef, and should be made without boiling, as heat coagulates the albumen, and the resulting liquid is only a gelatinous solution of the salts, and contains no nutriment. Soft-boiled or raw eggs, gelatine and custards are to be recommended. Water should be freely given to allay the thirst, and to assist in the elimination of the poison from the system.

2. *On the Use of Medicines.*—As far as the treatment of this disease by the use of medicines is concerned, there are no so-called specifics. The basis of the rational treatment is founded on general principles. The indications that call for the use of drugs, are certain special symptoms, which from their severity call for active medication. The more important of these are fever, diarrhœa, hemorrhage from the bowels, and nervous symptoms.

Fever.—In the first place, the poisoned state of the blood must be looked after. Quinine, salicylates, and the mineral acids are supposed to exert some good influence over this fluid. Quinine is the drug "par excellence," and may be used from the beginning of the disease to its termination. A two-grain pill every four hours will act as a tonic to the blood and system in general, thereby increasing the powers of digestion. This size dose of quinine is too small to have any decided controlling action over the high temperature. If this is to be influenced much, larger doses are required.

Now, a word in regard to the use of heroic doses of quinine in this disease. That large doses of quinine, say from twenty to sixty grains, do diminish high temperature, there is no doubt, but that it is also liable to increase the typhoid condition, *i. e.*, dry tongue, tympanitis, diarrhœa, and stupor, there is also no question. If, of course, there is a decided malarial element complicating the fever, then these large doses are indicated and the specific action of the drug over the malaria will soon be made apparent. In my opinion, these large doses for the relief of high temperature should only be used after all other measures have failed. Salicylic acid, or the salicylates in large doses, twenty to sixty grains are used to relieve high temperature. Their employment requires care on account of their possible irritating action on the already weakened heart. The mineral acids are considered as highly curative by many eminent physicians. Statistics have shown that there is a less percentage of deaths when the acids are employed than when they are omitted from the treatment. The favorite acid employed is the officinal dilute hydrochloric, in doses from ten to thirty drops every three or four hours. Properly diluted and sweetened with lemon syrup, it makes a very palatable beverage for allaying the thirst and aiding digestion.

The typical lesion of typhoid fever is, as you know, the ulceration of the solitary and Peyer's glands in the small intestines. Now there is no doubt that this ulceration, if severe, has a tendency to elevate the temperature, adding to the essential a secondary fever; and further, by giving special attention to the treatment of these ulcers, you can, in a measure, control the fever. This is to be accomplished by the use of those drugs which have a decided curative local action upon them. These are nitrate of silver, subnitrate of bismuth, acetate of lead, carbolic acid, and spirits of turpentine.

I have been using almost exclusively nitrate of silver in $\frac{1}{4}$ grain doses, in pill form, four times a day. This treatment is advocated and urged upon the profession by Prof. Pepper. He combines with the silver $\frac{1}{4}$ grain opium if the bowels are loose, and ext. belladonna when constipation exists. The following is a good combination, and one which I frequently employ:

℞. Quiniæ sulph., ℈ij.
Pulv. opii.
Argenti nitratis, āā gr. v.
M. ft. pil. No. xx.
S.—One pill four times a day.

Extract of belladona or powdered digitalis may be substituted for the opium as the case may demand. If the nitrate of sliver treatment be persevered in, you will be astonished at the good results in the way of fewer complications and a diminished mortality. Bismuth, S. nit., and plumbi acetas, are not as efficacious as the nitrate of silver. They are more useful for the control of the diarrhœa. Turpentine is to be used when convalescence is protracted beyond the usual period, which condition is generally due to slowness on the part of the ulcers to heal. It is also a very valuable remedy for the relief of tympanites, dry tongue, with sordes on the teeth and gums. Carbolic acid is indicated when any putrid element exists. One-quarter grain of the crystallized acid may be used in pill form four times a day.

Diarrhœa.—When the bowels are moved but once or twice in the day, no notice need be taken of them. If, however, the stools exceed that number, and are watery, they then tend to in-

crease the exhaustion of the patient, and must be controlled as they may seriously retard the patient's recovery. In the first place, look to the diet. If your patient has been taking beef tea, stop it. Milk and lime-water is the best food under these circumstances. Bismuth S. nitrat. in ℈j.-doses, either alone or combined with one-fourth grain of opium, every two hours, makes a very efficient remedy. If this fails, (it rarely does), then a pill composed of plumbi acetas gr. ij. with ext. opii gr. ¼ every three or four hours should be tried.

Tympanites.—This is a very constant and one of the earlier symptoms of typhoid fever, and varies very much in severity in different cases. At times it becomes so enormous as to greatly interfere with the movements of the diaphragm and the comfort of the patient. Spirits of turpentine, in from ten to twenty drop doses, in emulsion, every two or three hours, is your principal remedy for the control of this symptom. Turpentine stupes applied to the abdomen, and also in the form of enema may be tried in addition to the internal exhibition of the drug. Opium is also of value.

Hemorrhage from the Bowels.—This is more of a complication than a symptom, and is, more or less, significant of danger. Absolute quiet of mind and body should, if possible, be obtained. Ice and iced water should be freely given. The vegetable and mineral astringents, especially tannic acid and the acetate of lead, are strongly indicated. From five to ten grains of the former, or a three-grain pill of the latter, may be given every two hours. These act locally upon the bleeding ulcers and control the hemorrhage by their styptic action. Opium for this condition is capable of doing much good; first, by allaying nervous excitement, which tends to keep up the hemorrhage; second, arresting peristalsis. Fluid ext. ergot in one-half drachm doses acts through the blood upon the circular fibres of the arterioles, causing them to contract and thereby stopping the hemorrhage. Spirits of turpentine sometimes arrests the hemorrhage when all other remedies have failed.

Nervous Symptoms.—Most of the nervous symptoms are an evidence of adynamia, and require the use of stimulants. The principal symptoms are headache, sleeplessness, delirium. For the headache and sleeplessness, the bromides, either alone or combined with chloral hydrat, are strongly indicated. The action of the chloral upon the circulation (heart) should not be overlooked. From 10 to 20 grs. of bromide, with 5 grs. of chloral, with syr. zingiberis, and aq. camphora, may be given every two hours until the desired effect is produced. A five grain Dover's powder three or four times a day is a very efficient remedy to produce a good night's rest. Ice water applied to the head, together with frequent washing of the face with cologne, orange flower or bay water, is very grateful and refreshing, and tends to diminish cerebral vascular excitement.

For delirium, the above measures may be tried and generally with advantage.

3. *Stimulants*, when properly and judiciously employed, afford a valuable and important weapon in the hands of the physician. Considerable nicety and tact are required in their employment. If given at the right time and in the proper quantities, they are capable of doing much good. If, however, they be injudiciously employed without regard to the indications that call for their employment, and merely used because the patient has typhoid fever, they then may do harm. Many cases of typhoid fever get well without the use of any stimulants. This is especially so of this disease, when mild in form or when it affects children. On the other hand, life has been saved by the prompt resort to stimulants when danger was imminent. When stimulants are indicated in the beginning of the fever, the milder ones, as wine whey, mulled wine, should be employed. Later, as the symptoms become more urgent, the stronger preparations, such as whisky or brandy may be required. These, mixed with milk and eggs, in the form of milk punch or egg nogg, form a highly nutritious but somewhat heavy food, which is adapted to supply the waste consequent upon the rapid tissue changes which take place in this disease, and especially during the acme of the fever.

The indications for the employment of stimulants are:

1. As a rule, in all old persons.

2. All cases characterized by adynamic or ataxic symptoms.

3. Marked typhoid condition; *i. e.*, dry brown tongue, with sordes on teeth and gums, with excessive tympanites.

4. Persistent headache, tremulousness, and constant delirium.

5. Feeble or absent first sound of the heart, frequent feeble pulse.

6. Complications.

The kind and amount of stimulants to be used are determined by each individual case and the effect to be produced. When there is an improvement in the symptoms for which you gave the stimulus, then it is doing good. When, however, the symptoms are increased, it is then doing harm, and should be diminished or stopped entirely.

4. *Baths.*—It has been demonstrated, experimentally upon the lower animals, that excessive bodily temperature causes certain disturbances of the nervous and circulatory system, and the withdrawal of the heat by the application of cold, causes almost immediately their disappearance. If this is true in man, then it follows, *a priori*, that many symptoms of typhoid fever are consequent upon the elevated temperature. Hyperpyrexia is the cause of grave consequences, and always the source of anxiety to the physician. When the evening temperature reaches 104° F., the case assumes a somewhat serious aspect, and calls for the use of remedies for the control of high temperature. Baths for the relief of hyperpyrexia is an old custom which is being revived and introduced as an improvement in modern therapeutics. This plan of treatment is extensively employed in Europe, particularly in Germany. In America it is not as popular, probably due to the fact that there are fewer cases that demand it on account of their mildness, and probably on account of the prejudice against its use.

By a bath is understood the taking of a patient whose temperature is over 104° F., and placing him in a bath-tub containing enough water for covering the entire body. The temperature of the water to commence with should be at about 100° F., and afterwards gradually reduced by the addition of cold water or ice if necessary, until you produce a reduction in the patient's temperature. The duration of the bath is determined by each case and the effect produced. The patient is then taken out, rubbed dry, and placed in bed. If the temperature should again run high the bath may be renewed. In some cases it may be necessary to renew them as often as every two hours in order to keep the temperature down. To give the bath requires trouble, assistants, and certain appliances. For this reason the bath treatment is not very popular in private practice, and is generally resorted to in hospitals, where they have all the necessary conveniences.

There is no doubt but what baths are highly useful in cases where the high temperature threatens the life of the patient, and where you want a prompt and efficient remedy for its reduction. In thermic fever, tetanus, typhoid and typhus fevers, while the temperature sometimes reaches as high as 106° F. to even 110°F., then baths are strongly indicated. But in the majority of cases you can accomplish the same object by the modified antipyretic treatment; *i. e.*, sponging, wet pack, etc. Indeed it is always well to first begin by sponging the body or using the wet pack before you resort to the bath. When the morning and evening temperature is 104° F., then it is time to begin by sponging the body. This may be repeated as often as every two hours during the day and night. The temperature of the water for this purpose should be about the temperature of the normal body, and gradually reduced to 60° or even 40° F. If this does not keep the fever in check, then the baths or large doses of quinine may be used as a "dernier" resort.

COMMUNICATIONS.

SHALL I LOCATE? AND WHERE?

BY GEORGE B. H. SWAYZE, M. D.,
Of Philadelphia, Pa.

(*Continued from page* 287.)

Why do not physicians collect their bills? The self-confident tyro promises himself that he will not be chiseled out of his earnings, like these poor doctors do who are always short. Let me hint to young men who think of making medicine their professional business, that the *business* elements of other occupations (that of the undertaker excepted) generally come to people when they are relatively well, in health and strength, when they are upon their feet, earning money, prospering, in position (if ever) to pay for what they get. But the business of the physician reaches people when they are sick, disabled, under the hand of misfortune, down on their backs, losing time and wages, hampered by extra expenses, sometimes crippled for life, and sometimes under the blight of death. Now, how are doctors to successfully collect bills under these untoward circumstances? Who solves that problem will prove a benefactor to the profession. Perhaps one says that the husband (if there be one), the bread-winner and money-earner, may not be the one who needs the medical attendance. Very well, let us take the other horn of the dilemma. Say it is the wife who is sick. She is the home-keeper, the natural family nurse; others must be procured to take her place as housekeeper and mother; expenses are increased; husband loses time; wet days prevent him from working; medicines must be bought; accounts expand; rent falls in arrears; a child or several may fall sick and double the expenses, or one may die and triple them; and with a large proportion of people in large towns, and especially in cities, this condition of affairs goes on from year to year with unforseen variations. Pray what chance has the physician to collect

fees? What is there available to collect from? Does it not rather painfully wrench his heart to be obliged to ask for money at all? Will he not rather unavoidably despise himself for adding to the burden of the unfortunate, who are no better off in worldly possessions than himself? Will he not often murmur, and justly, against the choice or the luck by which he was placed in such a painful, unfavorable position for making his way in the world? True, the doctor is almost harrassed for money; must he also harrass those who have it not to spare?

Does one say, "Collect it from the rich?" Ah, many a hard-working, proficient, sensitive physician does not have the rich for patrons! There is fashion in doctoring, as well as in dress and upholstery. And again, the rich do not propose to pay for the poor, except in their own way. The prerogatives of the prosperous are as inviolable as are the rights of any other class, and the honest physician will ever shrink from playing the freebooter because he falls in with a friend who possesses a purse; and it is the experience of some practitioners that the well-to-do, being more independent, are slower to make settlements than the less fortunate.

And yet, furthermore, before entering on the second topic of this paper, it is not until young physicians have been striving for remunerative practice for years, that they become practically conscious of the extent of the injuries they sustain through the competition of patent and other classes of proprietary medicine makers. Both in town and country the physician finds the nostrum advertiser boastfully usurping the field against him, and either covertly or openly entrenched in almost every house for the treatment of ailments in general, while the regular practitioner is too often left for a "Jack-in-a-pinch," or the last resort. Even then, he is sometimes not unlikely to have the felicity of hearing it sounded abroad that some nostrum completed the cure, if cure there was, and did more good than the doctor; while if his attendances were without avail, criticisms and reproaches season his reward.

Having decided to locate somewhere, the beginner (and often the practitioner who proposes a change for the better), earnestly seeks the best light he can obtain to aid his choice.

Although the drift of this paper is designed to throw out beacon lights from the reefs and shoals of medical practice, for the benefit of inexperienced young men setting out on their untraversed line of work, or who may have in contemplation the pursuit of medical practice for a business, its hints may be especially available by reflective practitioners who have occasion to make suggestions or give advice to others in relation to the choice of profession and location. If a young man with a penchant for the work would make a more successful *doctor* than anything *else*, he should be encouraged to devote time and means to that end; but if I believe he would succeed in life equally well, or better, in some other pursuit, common fairness prompts me to earnestly advise him to *not miss* his better chance to attain prosperity and success, by involving himself in the cumbersome cares and hindrances of medical practice—and I frankly state the reasons. Locating for practice graphically resembles locating for fishing; any sort of fisherman may get a few minnow nibbles at his hook; but to make a haul, even the most expert rod-and-reel's man must throw out line where there is enough game for supper. In many locations a man of fair attainments and natural fitness will make a living and something over from the start; in other locations the same man would be compelled "to labor and to wait" for five, ten, or fifteen years before he could consider himself successfully established, and his necessary annual income secure. This fact applies to both country and town, but the latter contingency is especially true of large cities, where, above all other places, physicians crowd in to an extent two or threefold in excess of the ratio of obtainable patients and incomes by which physicians are fairly enabled to live.

"Doctor, would you advise me to locate in Philadelphia?" a young man from the country recently asked. I believe he was a medical graduate of about a year, and had served some apprenticeship in practice in one of the large hospitals here.

"How much money have you?" was my question.

"Very little—you might call it none," was his reply.

"Then," said I, "knowing what the disadvantages are to a beginner in a city like this, the chances wonld be heavily against you in Philadelphia for five or ten years at least, unless you could marshal to your service the prestige of an extensive partisan acquaintanceship, or unless you possess the benefits of exceptional family influence, or unless to your moral qualities you can add a brilliancy of professional talent that readily eclipses the unusually vigilant and able competition that already overcrowds the field. But, if yours is the class of genius that will enable you to keep up appearances, make display, rent a

permanent pew, live on an expensive street, keep out of debt, and attract attention by the lustre of such work as you can get to do, and keep this up for a few years without reliance on collections, then you stand a change of getting substantial foothold."

If a man can live without money, he should be able to live anywhere; but large cities, where the highest prices prevail, where the hand must be constantly opening the purse, where people must all make their livings off of each other, and can gather nothing from the products of nature, where the exactions of fashion and custom swallow the income with insatiable grasp, where the army of the impoverished daily grows larger and the demands of charity relatively expand into a monopoly, where the disabled are immediately distanced by the forced rush of the masses, and personal identity is lost under the waves of the crowd, surely such a city would not prove a paradise to a physician without liberal resources. It is the illusive *appearances* of city prosperity that so often attract practitioners from the country, a step almost invariably attended by depreciated incomes, loss of profit-margins for years or perhaps for life, and not unfrequently indeed a partial or total freezing out from professional pursuits for a livelihood. Students attending lectures, and visiting practitioners accustomed to borough simplicity or pastoral quiet may be temporarily dazed by the sheen and glamor that large cities present, but these bead-spark les of the restless spirit of city life are but dissatisfying intoxicants of the mind, that excite expensive desires, arouse envious longings, incite improvident outlay of earnings, and sap thrift of her substantial vitality. The physician soon finds that fine clothes and fine houses are not often indicative of full purses and prompt payments; and while, to keep up corresponding appearances and exist, his expenses have been trebled above what they were in the country, his perplexing disabilities are the more prone to goad him into unhappy regrets at his unwise change of base.

Physicians and others in country places do not usually understand the high pressure principles on which affairs are worked in large cities—an exciting, disintegrating, consuming system that rushes, exacts, strains, and harasses the masses to the death. *Appearances* is the tyrant that crushes all. Necessities are made the lever of continuous oppression. Hundreds of thousands literally work their eyes out to keep a roof over head and get bread enough for the stomach to enable them to hold on. Investors in ground and builders of city houses set the high keys of monthly demands. To preserve the attractions, houses must be more or less imposing in appearance. But white marble steps and front trimmings mean for the tenant bigger rent, multiplied expenses to keep up corresponding style in furnishing, additional toil, hiring, and feeding.

This item seems inconsequent at first glance. It would be relatively so if it cut the income of the physician only; but it is the universal condition, and thereby curtails the people's means from which the doctor must expect pay. Anent to this, the anarchy of expensive, fashion-changing dress, a *sine qua non* of city modes, must be faced. If the embarrassed doctor with his wishful family expect that conscientious debtors will curtail dress expenses to pay his bill against them, he will soon find his theology in need of revision: the moral code of dress recognizes no right but to get it—knows no claim but to show it. Outside of large cities physicians would consider themselves mere cobblers in practice, if their business did not afford horse, carriage, robes, and sleigh from the start. These favored brethren of the healing craft smile at grim facts when told that, in consequence of the surfeit of doctors in cities, it takes many a plodding practitioner ten to fifteen years to reach a plane of business that comfortably enables him to keep a horse. Let items demonstrate. In Philadelphia a horse means an expense of $20 to $30 per month for stable keep; shoeing bills four times as large as are made by country roads; frequent lameness and short use caused by shock and wrench of cobble-stone driving, constant breakage, the hire and board of a lad or man to sit in the carriage and hold the beast from door to door. "Doctors do not need a horse in the city," says more than one. Quite true; if it were not also true that such is the tyranny of human caprice, that the public gauge a doctor's abilities by his horse and wagon, and he feels constrained to strive to keep up this demonstrative evidence of his competency to prescribe, even though he must be crippled with thorny debts or rigorously stint at home.

(*To be continued.*)

Infected Dispatches.

From a foreign exchange that we learn the official at the Ministry for Foreign Affairs, Paris, was stricken down by a violent attack of yellow fever. It was discovered that the disease was contracted by opening dispatches from Brazil, where the fever was raging.

Hospital Reports.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM PEPPER, M. D., LL. D.,

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by William H. Morrison, M. D.

Autopsy of a Case of Chronic Cardiac Disease, with Double Murmurs at Mitral and Aortic Valves—Lymphatic Pseudo-Leucæmia—Splenic and Lymphatic Leucæmia.

Gentlemen: I shall ask your attention to-day to the lesions of an interesting case of chronic cardiac disease, which had been in the hospital on several occasions, and where, after prolonged suffering, death occurred a few days ago.

From the notes taken of his condition on October 25, 1881—one year ago—I find that he was twenty-five years old, Irish by birth, but had been in this country for several years. His habits of life were moderately good. The heart disease was distinctly traceable to an attack of rheumatism, from which he suffered in 1875. In the spring of 1876, he had marked evidences of obstructive disease of the heart, spitting of blood, dyspnœa, palpitation, and the like. He gradually grew worse.

In the spring of 1880, he had an attack of measles, complicated by bronchitis. With this, there was bloody expectoration.

In the winter of 1880–81, he had repeated attacks of bronchitis, with spitting of blood and dyspnœa, to such an extent that he could not lie down.

When admitted to the hospital (October, 1881) there was congestion of the lungs, general dropsy, marked enlargement of the heart and organic disease of the mitral and aortic valves. He improved greatly under treatment, and left the hospital to do light work.

He returned to the institution June 8, 1882, and remained until his death, which occurred on the 28th of this month. On his return the physical signs were much the same; the evidences of enlargement more marked and the pulmonary stasis constant and extreme. He was cyanotic; the extremities were bluish, but not dropsical. The apex beat of the heart was felt in the sixth interspace, one inch outside of the nipple. The impulse was strong and heaving, and the area of pulsation greatly extended. The whole præcordia was distinctly prominent. There was a slight impulse felt in the fourth interspace, at the right border of the sternum. This was due to dilatation of the right ventricle. The impulse of the heart was also felt in the epigastrium. The cardiac dullness extended to the left of the sternum, in the second interspace, one and a half inches; in the third interspace, three inches, and in the fifth and sixth interspaces, to the nipple line. The dullness also extended to the right of the sternum in the third interspace.

The mitral valve was the seat of a double murmur, of which the systolic or regurgitant was loud, coarse, and of low pitch, and was transmitted to the angle of the left scapula. The other, apparently due to mitral roughening, was presystolic in time, and was heard best over the body of the heart and inside of the apex beat. At the aortic valve also were heard two murmurs, a systolic and a diastolic. The former, dependent upon obstruction, was loud, coarse, of low pitch, and was carried well into the vessels of the neck.

The diastolic murmur, due to regurgitation, was heard best at the aortic cartilage, and was transmitted, as such murmurs constantly are, along the border of the sternum.

The heart's action was irregular both as regards its rhythm and its force. The lungs were much congested, and crackling rales were heard over all parts of them.

He was again relieved by treatment, but the relief proved but temporary. The heart failure became more marked, and at last caused his death.

We had here evidences of grave organic disease of the heart; dilated hypertropy of both ventricles and auricles, disease of the mitral and aortic valves, along with intense pulmonary congestion and repeated attacks of hemorrhage. The hemorrhages in this case were unusually severe. We should, therefore, expect to find intense congestion of the lungs, and I should not be surprised to find that there was apoplexy of the lung—that there were thrombi in that organ.

Let me now refer to the notes of the post mortem, which was made on the 28th of this month. There was no special emaciation. There were old pleuritic adhesions, and a little effusion was found both in the pleural and pericardial sacs. The lungs were intensely congested, and in the lower lobe of the right lung there were several hemorrhagic infarctions. On section, the alveoli were found to be thoroughly infiltrated with coagulated blood. These infarctions are partly the result of rupture of the vessels, and coagulation of the blood in the alveoli of the lung, and partly of coagulation in the minute vessels of the part. These hemorrhagic infarctions are quite common in obstructive diseases of the heart, being most common where the mitral valve is the seat of obstruction; at the same time, I have found them in cases of mitral regurgitation and in diseases of the aortic valve.

The heart was greatly enlarged, weighing 900 grams (30 ounces). The normal weight of the heart is eight ounces. The average weight of enlarged hearts may be said to be about fifteen ounces. A heart of twenty-five ounces is very large, and one of thirty is enormous; but I have seen hearts weighing over forty-five ounces.

Here is the heart. It is a bovine heart. There is dilatation of all the cavities and walls. This is most marked in the left ventricle. The walls are thicker than normal. The fact that the walls have maintained their thickness in spite of the great dilatation of the cavity, shows that there must have been great hypertrophy. The auricles are much enlarged; the left being almost as large as the normal heart. We also note that there are a great many ante-mortem clots. These are firm, white, adherent; wound around the irregularities of the lining of the ventricle. The clots in the right ventricle pass around the fleshy columns, but have not to any great extent obstructed the tricuspid valve. The tricuspid valve is not ma-

terially thickened. You must, however, remember that the right ventricle is so much dilated that when it was filled with blood, the valve could not close the enlarged orifice, so that, while there was no especial disease of the tricuspid valve, it had become, in consequence of the great dilatation of the ventricle, practically insufficient. During life we recognized the dilatation of the right ventricle by the extension of dullness over the sternum and the appearance of pulsation at the right edge of the sternum in the fourth interspace. The time when the tricuspid valve became insufficient to close the dilated auriculo-ventricular orifice, was marked by the sudden appearance of distension and pulsation of the jugular veins at the root of the neck. The pulsation was due to the impulse transmitted through the tricuspid valve and the auricle to the blood in the descending vena cava.

The pulmonary artery is decidedly thickened and dilated. Its walls are as thick as those of a normal aorta. This has resulted from the long standing congestion of the lung, throwing increased work upon this vessel.

On the left side there are a few white clots, but they do not pass into the aorta. Though attached to the leaflets of the mitral valve, they are not large enough nor are they located so as to greatly interfere with the functions of the valve.

As I have said, there was double disease of the aortic valve. Here we have the evidence. The leaflets have, as a result of chronic inflammation, become shrunken and contracted, and are no longer able to close the aortic orifice; consequently there was regurgitation. These valves are as stiff and hard as though they were made of wood. They are situated directly across the channel of the blood, and hence, when the ventricle contracted, the blood came in contact with these stiff, rough valves, giving rise to marked obstruction, there was produced a strong systolic murmur. The orifice of the mitral valve is so contracted that I cannot pass my index finger through it. This has been caused by inflammation of the valves with adhesion between the leaflets. There is left only a button-hole-like orifice. On the auricular side of this valve there is a layer of calcareous matter. There has been here a mass of granulation, the organic matters have been absorbed, and this calcareous plate has been left. You can easily understand how this condition would cause the hoarse, presystolic murmur heard during life. Although the mitral opening was so small, the valves could not close it perfetly, hence we had mitral regurgitation.

The original lesion in this case was the double valvular lesion with two murmurs at each valve. This was followed by dilatation and hypertrophy of the left ventricle, and this led to the same condition in the left auricle. This caused enormous pulmonary engorgement. The great obstruction to the passage of the blood through the lungs led to dilatation and hypertrophy of the right ventricle. Eventually, this became so marked and the stretching of the auriculo-ventricular orifice so great that the tricuspid valve was no longer able to close it, and we then had great distension and pulsation in the jugular veins.

The abdominal cavity contained a straw-colored fluid. There were evidences of an old peritonitis, thickening of the peritoneal membrane, and adhesions. These were particularly marked about the region of the liver.

The liver was diminished in size, weighing three and a half pounds, and exhibiting the changes of red atrophy, that is, chronic congestion with some thickening of the interstitial tissue.

The spleen weighs nine ounces, and is the seat of a hemorrhagic infarction, which is hard, resistant, and yellow in color. On section it is wedge-shaped. Originally this was of a purplish color, but gradually the hæmatin of the blood corpuscles was absorbed and the organic parts passed into a state of fatty degeneration. the altered hæmatin and the oil globules giving this yellow color, which is characteristic of old hemorrhagic infarctions.

I wish you to note particularly the differences between these hemorrhagic infarctions of the spleen and the little yellowish-gray bodies studded through the spleen in splenic leucæmia. On microscopical examination, the infarctions present simply the evidences of altered blood clot with degeneration of the elements of the spleen, while the other little bodies are shown to be the result of hypertrophy of the lymphatic elements of the spleen. These become enormously overgrown, sometimes appearing as little bodies of the size of a split pea, studded through the organ, and sometimes running together, forming masses as large as a marble. They are of a grayish color, but may from fatty degeneration become of a yellowish-gray.

The kidneys were enlarged, each one weighing eight and one-half ounces, and presented the changes which are met with in chronic heart disease, *i. e.*, evidences of long-standing congestion, enlargement of the vessels and thickening of the interstitial tissue. I think that the microscope will also show the presence of catarrhal nephritis.

The description of these anatomical changes will be of interest and value when we come to study the clinical relations of cardiac lesions.

Lymphatic Pseudo Leucæmia.

(*See* REPORTER, *Vol. XLVII., p.* 708.)

You will remember that a week ago I brought before you the specimens from a case with the following history. A young man twenty-two years old, a resident of Mauch Chunk. He had had for nine years a slight enlargement of the glands under the right ear. Gradually other glands became involved. All the swellings were painless, except one under the left ear, which was slightly tender. Six months ago urination increased in frequency until he had to pass his urine every five minutes day and night. After this, he began to have pricking pains in the legs, extending from the crest of the ilium to the ends of the toes. The pains growing worse obliged him to quit work. He then had angeioleucitis of the left leg, due, probably, to the pressure of a large mass of glands in the left groin. There had been some loss of flesh and occasional bleeding from the nose and once from the bowels. There was great enlargement of the liver and spleen, and a soft murmur was heard over the heart. Later, entire paralysis of both extremities occurred. An examination of the blood showed that the red corpuscles were decreased in number, but that the white were not increased. The exact number of red corpuscles to

the cubic millimetre was not determined, but the reduction was considerable. The patient continued to fail and died in a state of intense anæmia.

The *post mortem* examination showed numerous masses of enlarged glands in the neck, axilla and groin. The abdominal glands were also greatly enlarged, and it was by their pressure upon the nerves emerging from the spinal column that the pain, the alteration of sensation, and finally the paralysis of the lower extremities, had been produced. None of the enlarged glands appeared to enter the spinal cord, although we had not the opportunity of positively determining this. The liver and spleen were both greatly enlarged. There were none of the little bodies which I have described as occurring in splenic leucæmia.

I told you that I should return to that case and consider with you the results of the microscopical examination of the enlarged glands. In studying the case last week, it was clear that these enlargements were not cancerous, they certainly were not scrofulous, and the evidence was totally against their being syphilitic. There was then every reason to conclude that this was an instance of that curious group of diseases where we find affection of the lymphatic tissue with dyscrasia of the blood, and which are grouped under the general name of leucæmia (a very bad name). Leucæmia means white blood, an excess of the white corpuscles. We meet with cases of this disease in which there are organic lesions of the lymphatic glands. This constitutes lymphatic leucæmia. In other cases the lymphatic glands are not much involved, while the spleen is greatly enlarged; this is splenic leucæmia. With either of these the liver may be greatly enlarged. There is a third form of the disease in which neither of these organs are enlarged, but in which the lymphatic elements in the marrow of the bones have undergone hypertrophy; this is medullary leucæmia. We have then lymphatic, splenic and medullary leucæmia.

In some of these cases, neither at the beginning nor towards the close, do we find any increase in the number of the white corpuscles, but a progressive reduction in the number of the red. This you cannot call leucæmia, because the condition which gives to the disease that name is absent. This class of cases is therefore called pseudo-leucæmia. Of these we have three varieties according to the seat of lesion, lymphatic, splenic, and medullary pseudo-leucæmia. We have then a group of cases in which the general characteristics are the same. They all have the same downward course, uninfluenced by treatment, the same progressive anæmia; the blood in all shows a great reduction of the red corpuscles, sometimes with and sometimes without increase in the number of white, and they all show changes either in the lymphatic glands, the lymphatic follicles of the spleen, or in the marrow of the bones. This whole group of diseases must be regarded as a pathological unit, and should be brought under one general term. This would render their recognition much easier. They might be named after some one who has described them. Hodgkin describes one form, which is known by his name. I have no objection to the whole group being called Hodgkin's disease. Some years ago, I proposed a term which is perhaps being slowly adopted. In all these cases, there is a defective crasis of the blood, there is defective elaboration of the blood, or æmotosis. I therefore called this group of cases by the name of anæmotosis, meaning simply defective elaboration of the blood. This term embraces all cases, and is the only one yet suggested which does embrace all.

In the case of which I have spoken, the microscopical examination showed it to be one of lymphatic pseudo-leucæmia or Hodgkin's disease. This is perhaps the rarest, excepting medullary pseudo-leucæmia, of the six forms of anæmotosis.

I am induced to return to this subject by the fact that I have to-day the opportunity of showing to you a case of splenic leucæmia.

Splenic and Lymphatic Leucæmia.

I shall first call attention to the main points in the history of the present case. This gentleman, 41 years old, noticed some eight or nine years ago enlargement of the glands at the angles of the jaws, armpits, and groins. They came without obvious cause, and being in perfect health he paid no attention to them. One of the most curious things about all these cases is the want of a definite cause. Frequently this disease comes on in people who appear to be entirely healthy, who are in comfortable circumstances, who are not living in an unhealthy district, and who are not the subjects of any inherited or acquired disease. If I were to be governed by my own experience, I should suggest two thoughts in connection with the causation of anæmatosis:

1. I have seen these cases arise after nervous shock or strain; for instance, a man is working hard to hold up a business during bad times, and finally fails: he goes through a terrible mental strain, and soon the symptoms of this disease appear. I have seen such cases. The same thing happens with other great dyscrasiæ. Time after time have I seen cancer make its appearance in persons predisposed to it, after nervous shock or strain.

2. I have seen anæmotosis develop in cases where for a long time there had been going on some local irritative process; for instance, a minute abscess lasting for many years. It is not impossible that some infectious matter may be absorbed from such a centre and so taint the system and influence the general nutrition as to act as a cause of this obscure disease. I have seen the disease occur in those who for years have had defective teeth and caries of the maxilla, also in patients with ulcerated hemorrhoids, chronic diarrhœa, and enlargement of the follicles of the intestinal mucous membrane.

In the present case, after this enlargement of the glands had continued for some time, he noticed the gradual development of muscular weakness. This increased and was associated with marked pallor and all the appearances of anæmia. His heart began to be easily excited. There has not been much loss of flesh; the appetite remains good, and the digestion continues fair. There is no apparent reason why the nutrition should all the time be suffering and the crasis of the blood to be continually growing worse.

This is the history: a gradually increasing muscular debility and an irritable state of the circulation, without much loss of flesh, no commensurate loss of appetite or failure of digestion,

and no morbid discharge to account for the symptoms.

The lymphatic glands are not much enlarged, but there is a great increase in the size of the spleen. It extends from four inches above the margin of the ribs downward to a little below the crest of the ilium, and from the line of the kidney behind to a line midway between the median line of the body and the side in front.

Of course, under such circumstances, an examination of the blood is necessary. It is only by this that we can make a positive diagnosis. I wish not only to make a microscopical examination of the blood, but shall reserve some of it in order to have the number of corpuscles counted. The blood that flows from the prick in the finger is exceedingly thin, scarcely making a stain. Under the microscope, I find a great number of white corpuscles. I have never seen a greater excess of white globules. The red corpuscles do not form rouleaux. From this cursory examination, I should say that there were as many, if not more, white than red corpuscles. I shall have an accurate enumeration made of these cells.

This, then, is a case of splenic leucæmia, *i. e.*, anæmotosis, in which the spleen is chiefly involved with great increase in the number of white cells.

The treatment of this condition requires some attention at our hands. As a general rule, treatment is unsatisfactory. For reasons which I shall mention at another time, I propose to treat this patient by a prolonged course of mercurials in alterative doses.

As the hour has expired, I shall have to return to this subject on some future occasion.

NOTE.—The result of the enumeration of the blood corpuscles made by Dr. Wm. E. Hughes was as follows:

Normal number of red globules per cu. m. m. 5,000,000
Normal number of white globules per cu. m. m. 20,000
In the above case, number of red globules per cu. m. m. 1,300,000
In the above case, number of white globules per cu. m. m. 1,245,000

NEW YORK HOSPITAL.

CLINIC OF PROF. WILLIAM H. DRAPER.

Reported by W. H. SEELYE, A. M., M. D.

Valvular Disease.

The next patient was admitted to the hospital on October 20. Name, M. V. Age, 30 years. Is married. Occupation, a bar-tender. His father died of Bright's disease at the age of sixty-two, and had never had rheumatism so far as the patient knows. His mother died of a cancer. The patient has always been a hard drinker, and he drank every day, with no seasons of intermission; but he never became intoxicated. He left off drinking a year ago. Twenty years ago he had an attack of rheumatism in the large joints, and was confined to his bed for one year. Since then he has had frequent attacks in all the large joints, and two years ago he had one which lasted two weeks. He has had the clap several times, and a chancre on the penis, followed by constitutional syphilis, but with no important results. He was generally healthy until fourteen months ago, when he first began to notice that he became short of breath, and had a distressing cardiac palpitation on going up stairs or whenever he exerted himself. On this account he gave up work last June and went to Saratoga to recuperate. He stayed there one month, and then returned home again and he went back to his work, where he had to stand up a good deal. He soon had swelling of the feet and ankles and legs up to the knees, and this got steadily worse, so that two months ago he again had to give up work. He has since been troubled with dyspnœa, even when lying in bed, and he sometimes sees spots floating before his eyes, and has attacks of vertigo. One week ago his abdomen became swollen, and he has been troubled with flatulence and some indigestion. His appetite is fair. Has no ringing in the ears, and no headache, and no urinary symptoms. During the past year his heart has sometimes stopped beating for a moment, and he has frequently been annoyed by a peculiar painful sensation over the nipple, which comes on and stops suddenly He has had no angina pectoris.

Gentlemen, there are some points in the subjective history here to attract our attention. In considering the hereditary history, it is always important to bear in mind the correlation of diseases, of which I have before spoken. You may not always find a direct inheritance of the same disease, as of rheumatism from rheumatism, or of gout from gout. But this fact should not lead you to suppose that there may not be an indirect inheritance of one disease from another of kindred nature. This patient has had rheumatism, but his father died of Bright's disease, and is not known to have ever had rheumatism. Yet it is possible that the Bright's disease was the sequence of a cardiac disease which had a rheumatic origin. There are many diseases which correlate each other, and it is as important to recognize this relation as to see the direct connection between certain diseases. This is especially true of nervous diseases. One variety of the affection may appear in the parent and another in the child, or one variety may appear in one child and another in another child. So always bear in mind the fact that the neurotic taint may manifest itself in the different members of a family, and in their posterity, in different ways.

In this man's personal history we see that he has been a hard drinker always, but that he did not get intoxicated. This is generally considered an accomplishment among drinkers; but it is not so. For because they do not easily get intoxicated, they therefore think that they can drink a good deal without doing themselves any harm, and so they are constantly poisoning themselves with alcohol without knowing it. The man who does not get drunk drinks all the time, but the man who gets intoxicated easily is not so continually irritating his viscera with poison.

Twenty years ago he was confined to bed for one year with rheumatism in all his large joints. He was then ten years old. As a rule, young persons who have been confined for months with rheumatism, will find that at some future time they will be troubled with cardiac disease.

He has had clap several times. Some men can

never be exposed to the contagion of clap without taking it, and in my experience this has been the rule in men with a gouty history. I find that persistant and obstinate catarrh of the urethra are very commonly associated with a gouty or rheumatic habit of constitution. He has also had constitutional syphilis, which did not amount to much. And this leads me to remark that syphilis is often an exceedingly innocent disease, and passes away without doing any permanent injury. In some people there seems to be no susceptibility to its poison.

He was quite well until fourteen months ago, when he noticed that he had dyspnœa and a distressing cardiac palpitation on exertion. These are the symptoms which usually first call the attention of the patient to a heart disease which has existed for many years before. The explanation of this is a capital fact in the pathology of cardiac disease. A valvular disease, for instance, occurs in a child ten years old, and it produces considerable obstruction to the current of blood, yet for a long period nature will compensate for this obstruction, and so no special attention will be attracted to the heart. But after many years there comes a time when this compensation ceases to be effective, and then troublesome symptoms begin to be noticed. The muscular tissue of the heart begins to degenerate, and so it has not power enough to overcome the obstacle, and then we get pulmonary congestion, and hence shortness of breath on exertion, and we find the heart enlarged, and all the other associated symptoms of valvular disease. This is the usual history of the patients who come to this hospital.

We now come to the objective examination.

Inspection.—You notice that his legs are bandaged below the knees, and his thighs are swollen and œdematous, and feel doughy, and pit on pressure. There is no swelling of the scrotum, as is frequent in these cases, for it has subsided because he keeps in the recumbent posture.

There is a slight accumulation of fluid in the abdomen, which gives a distinct sense of fluctuation. A pulsation can be plainly seen in the precordial region, lower and farther to the left than is normal. The apex, which should be in the fifth intercostal space, is here in the sixth, and as much as two inches to the left of the nipple. This, with the diffused precordial pulsation, is an evidence of hypertrophy of the heart.

Percussion.—The upper limit of precordial dullness is a little lower than normal here, and it begins in the second intercostal space at the upper margin of the third rib. To the left of the sternum the line of dullness begins on a line with the nipple, and extends one and a half inches farther to the left; and downwards the dulness extends below the sixth rib. The area of precordial dullness is therefore increased one-third to one-half. The weight of the heart drags it downward lower than usual, and the hypertrophy extends to the left, because the left ventricle is mainly involved.

Auscultation.—In listening for a heart murmur, the first thing to be determined is the relation of the murmur to the rhythm of the heart-sounds. This is often difficult to tell, even for experts. Sometimes this relation can be determined by first placing the finger on the radial artery and counting the beats until the rhythm is firmly fixed in the mind, and by then listening to the heart determine the relation of the rhythm to the two heart-sounds.

The next thing is to ascertain the point at which the murmur is heard with the greatest intensity. In this patient a murmur is heard with the first sound of the heart, and is a systolic bruit, and occurs while the ventricles are contracting and the auricles filling. This is sometimes called a direct murmur, and one occurring with the second sound, an indirect. This murmur is heard with the greatest distinctness not at the apex nor directly over the mitral valve, but at a point midway between the two, in the fifth intercostal space. We have here now determined the relation of this murmur to the rhythm of the heart, and its point of maximum intensity. It is therefore due either to an obstruction to the blood in passing through the semilunar valves, or to an insufficiency of the mitral valves allowing a regurgitation. The latter is the case here. Because of this regurgitation of the blood into the left auricle, it becomes overfilled and distended, and by thus interfering with the emptying of the pulmonary veins, causes an engorgement of the lungs. The right lung is most engorged here, for it expands less in respiration, and is somewhat duller on percussion than the left. The respiratory murmur on the left side is slightly exaggerated. On the right there is some retraction of the chest, and there is decided feebleness of the respiratory murmur. And over the lower half of the lung bronchial respiration and some moist crepitant rales are heard. The specific gravity of the two lungs is different. The right one is heavier, denser, and contains more blood; in other words, it is somewhat congested.

This pulmonary congestion is the first step in the process of the backing up of the circulation, due to the cardiac failure. And dyspnœa results now from the interference with the interchange of carbonic acid gas and oxygen between the blood and the lungs. The next step is dilation of the right ventricle from over-distension, and the insufficiency of the tricuspid valves, and so overfilling of the right auricle, and hence obstruction to the return systemic circulation.

In this man the area of hepatic dulness is increased downwards almost to a level with the umbilicus. This and the abdominal dropsy are evidence of obstructed portal circulation, and the general dropsy shows that the systemic veins are obstructed. Another evidence of the mechanical obstruction to the circulation in this case is the presence of albumen in the urine. Here we have seen the mechanics and the ordinary history of heart disease.

The extent and frequency of these secondary lesions are variable. There is usually congestion in the lungs, but the systemic and portal congestion are not so constant. Sometimes there is systemic congestion shown by the presence of albumen in the urine, but there is no portal congestion; in other cases, no albumen will be found, but there are evidences of obstruction to the portal circulation. Why there is this variation, I cannot explain.

One other point should attract our attention, and that is the character of the pulse in mitral regurgitation. Its peculiarity might be inferred from the action of the heart. Its weakness and

feebleness are the special points. So in this patient we find it a small, thin, and thready pulse.

A consideration of the subjective and objective phenomena of this case, renders a correct diagnosis easy. Our attention was especially arrested by the presence of a valvular murmur. And I speak of this again, in order to call your attention to a very important point. The murmur is not the most important symptom here, and by itself is not to be especially considered. A very common error is to exaggerate the significance of a murmur without inquiring into its cause or considering the condition of the patient. There may be heard a very loud murmur, and yet be no organic disease of the heart, as is the case in anæmic patients often, where a loud systolic murmur is heard. There are other murmurs the cause of which is not explained, called functional murmurs, which may be present for long periods; but they are not followed by either lung or systemic congestion, and are of no significance. By and of itself a murmur may mean little or nothing, and is only to be considered in connection with the accompanying phenomena. Patients are often severely frightened and made miserable by the hasty verdict of heart disease from the doctor; and though he afterwards finds that he has made a blunder, yet it is hard to make the patient believe that his first diagnosis was not correct. There is no organ about which patients are so sensitive, as the heart. Bear in mind the sensible remark made by Fothergill, of London, on this point, who says that "you should never speak to a patient about the presence of a murmur unless you are thoroughly satisfied as to its significance." Again, a murmur may exist for many years before it has any significance, and the patient should have the benefit of these years and not be troubled with anticipations of evil. He should merely be cautioned against over-exertion. And so he may live very comfortably until the period of compensation has passed.

There is, then, no question as to the diagnosis and prognosis in this man's case. There is so much to be said on the subject of treatment that I will defer that to another time.

Medical Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Infant Foods.

BY PROF. ALBERT R. LEEDS, PH. D.,

Of the Stevens Institute of Technology, Hoboken, N. J.

[Read by invitation, May 2, 1883.]

(*Continued from page* 294.)

An examination of the great variety of infant foods, the analyses of which are given in the following pages, shows that they can be classified most conveniently under the three heads of Farinaceous, Liebig's Foods, and Milk Foods (including condensed and preserved milk).

I. *Farinaceous.*

A. Wheat previously prepared by baking, including:

1. Blair's Prepared Wheat Food; 2. Hubbell's Prepared Wheat Food; 3. Imperial Granum; 4. Ridge's Food.

B. Mixtures of various cereals.

5. "A B C." Cereal Cream; 6. "A B C." Cereal Milk; 7. Robinson's Patent Barley.

II. *Liebig's Foods.*

8. Mellin's; 9. Hawleys; 10. Horlicks; 11. Keasbey and Mattison's; 12. Savory and Moore's; 13. Baby Sup No. 1; 14. Baby Sup No. 2.

III. *Milk Foods.*

15. Nestle's; 16. Anglo-Swiss; 17. American Swiss; 18. Gerber's.

CLASS I.—A.

	1. *Blair's wheat food.*	2. *Hubbell's wheat food.*	3. *Imperial granum.*	4. *Ridge's food.*
Water.....	9.85	7.78	5.49	9.23
Fat.....	1.56	0.41	1.01	0.63
Grape-sugar..	1.75	7.56	trace	2.40
Cane-sugar...	1.71	4.87	trace	2.20
Starch.....	64.80	67.60	78.93	77.96
Soluble carbohydrates...	13.69	14.29	3.56	5.19
Albuminoids.	7.16	10.13	10.51	9.24
Gum, cellulose, etc....	2.94	undeterm'd	0.50	
Ash.....	1.06	1.00	1.16	0.60

1. *Blair's Wheat Food.*—It is claimed that this is prepared from choice wheat in such a manner as to retain all the nutritive constituents and reject those which are irritating or otherwise objectionable. Moreover, that by cooking such physical and chemical changes have been brought about as to facilitate mastication and the subsequent action of the fluids of the stomach, thereby rendering the food more easily digested. It is stated to be especially beneficial in intestinal diseases like dysentery, cholera infantum, etc.

Uncooked, this flour has a sweet pleasant taste. When cooked according to directions it forms a very smooth paste with a faint tinge of color, resembling arrowroot in its flavor and quite palatable without the addition of salt, sugar, milk, or other accompaniments.

2. *Hubbell's Wheat Flour.*—Claimed to be made from wheat alone, floured and carefully baked from eight to ten hours, at about the temperature of boiling water. "It includes all the flesh-forming constituents, earthy and saline elements of the grain, with only a portion of the starch, and none of the silicated coating. It keeps without change."

This flour is quite sweet and palatable even in its uncooked form, and when moistened with the saliva is more pasty than the Blair's wheat flour. When cooked it forms a perfectly white smooth paste, with a very delicate flavor. It is more starch-like in consistency than Blair's, a difference due in part to the larger percentage of starch, and less pronounced in flavor, this being probably due in some degree to the smaller percentage of fat. In both Blair's and Hubbell's the per cent. of gum, cellulose, etc., is extremely small, in the latter so small that it was not determined. In nitrogen Hubbell's is much richer than either of the other two preparations, and its value for purposes of nutrition correspondingly greater. The reaction of Blair's food and of Hubbell's is in each neutral.

The excess in the amount of saccharine matter in Hubbell's food above that contained in ordinary wheat flour induced me to write for particulars of

the change which it had undergone. The process I was informed is as follows: A large baker's oven is heated to about 340° to 360° F. The flour contained in shallow Russia iron pans is then put in, the fire having meantime been withdrawn, the oven closed, and the flour left there about twenty-four hours. When the oven is reopened, the temperature will have fallen to 100°, and after sieving, the prepared flour will be ready for use. The flour used is the best grade as made by the roller process, the second grade containing more starch, less gluten, being that bought and used by bakers.

The two following analyses, the first of Hubbells' prepared wheat flour, the second of the flour from which the first was obtained by the process of baking as conducted in the manner above described, are interesting and important as elucidating the nature of the changes thus induced.

	Wheat flour.	*Same baked.*
Water	9.02	7.78
Fat	1.01	0.41
Grape-sugar	2.34	7.56
Cane-sugar	2.46	4.87*
Starch	76.07	67.60
Soluble carbo-hydrates	5.66	14.29
Albuminoids	7.47	10.13

It will be seen that the flour has lost moisture in baking, and also a portion of its fat. These changes, however, are of little moment compared with the considerable decrease of starch and its conversion into saccharine bodies. The soluble carbo-hydrates are considerably more than doubled, and this change is one of the greatest value and importance, so far as the dietetic value of the prepared food is concerned. The considerable increase in the percentage of albuminoids I am unable to account for.

3. *Imperial Granum.*—It is stated to be "in composition principally the gluten derived by chemical process from very superior growths of wheat—a solid extract." Dr. Fowler states (*Amer. Jour. Obstetrics*, April, 1882), as the result of his microscopical examination, that if the material from which this preparation is derived contains any gluten at all, the "chemical process" resorted to in order to extract it has at the same time either destroyed it, or so altered its character as to render it no longer recognizable by the usual tests. This is an excellent illustration of the difficulty which is encountered in deciding with the microscope upon the constitution of a cereal after treatment; for whilst Dr. Fowler's statement of the microscopic appearance is in accordance with my own observations, yet as a matter of fact the Imperial Granum contains 10.51 per cent. of albuminoids. On the other hand, this is not sufficient by any means to bear out the statement that the Imperial Granum consists principally of gluten. According to Dr. Fowler, it is simply coarse barley flour. My own observations make it a wheaten preparation.

4. *Ridge's Food.*—It is advertised as "prepared from carefully-selected winter wheat," reduced to an almost uniform fineness. The product is then thoroughly cooked by a steam-baking process, which gradually changes a large proportion of the starch into dextrine, excluding only the woody fibre. It is afterwards rendered a little sweet and slightly alkaline.

Dr. Fowler states (*loc. cit.*) that the Ridge's food is apparently barley flour finely ground, and that the odor, dough, and microscopic appearance indicate no other ingredients. I have placed it, in accordance with my own observations among the wheat preparations. Both Imperial Granum and Ridge's food when cooked are very palatable. Both have a neutral reaction. Both have a considerable percentage of albuminoids, that of Imperial Granum in the two samples analyzed being the higher, and both have a very high percentage of starch.

It should be very carefully borne in mind that wheat flour after carefully baking is extensively altered, and that the albuminous bodies become considerably more soluble in water. A wheat flour, which in its original condition would yield after baking a very considerable amount of crude gluten on washing, after baking will leave a much smaller quantity, and for this reason the percentage of crude gluten in baked flours cannot be roughly estimated by washing and drying. For the same reason a baked wheat flour may be mistaken for barley flour, which gives a non-glutinous dough.

CLASS I.—B. MIXTURE OF VARIOUS CEREALS.

	6. *"A B C." Cereal Milk.*	7. *Robinson's Patent Barley.*
Moisture	9.33	10.10
Fat	1.01	0.97
Grape-sugar	4.60	3.08
Cane-sugar	15.40	0.90
Starch	58.42	77.76
Soluble carbohydrates	20.00	4.11
Albuminoids	11.08	5.13
Cellulose, gum, etc.	1.16	1.93
Ash	—	1.93

5. *"A B C." Cereal Cream.*—Stated to be "prepared from the most nutritious and digestible parts of the choicest wheat and barley, with all impurities removed." It appears to be a coarse meal of wheat and barley, but I did not analyze it, the box which I purchased being probably old and its contents spoiled.

6. *"A B C." Cereal Milk.*—"Prepared by a scientific admixture of the nitrates and phosphates of wheat with the whole barley; and after adding the required sugar, we have secured an analysis almost identical with human milk. The wheat is first cleansed, then hulled, coarsely ground, and the surplus starch removed, leaving the nitrates and phosphates. The barley is hulled, crushed, and mixed with a proper proportion of the wheat nitrates and phosphates. The mixture is cooked by steam, desiccated, ground into fine flour, specks bolted out, and the requisite amount of sugar added."

The statement that "this food corresponds nearly with human milk in its nutritive ingredients" is untrue. The proportion between its various constituents is entirely unlike that in human milk, and more than half consists of starch, a body entirely foreign to milk.

7. *Robinson's Patent Barley.*—"Patent barley, technically, is ground pearl barley. Yet this preparation, while possessing most of the characters of what it purports to be, is somewhat unlike pure barley flour. Its dough is more adhesive, and the white color, together with the

* With some dextrine.

mild barley odor, suggests the admixture of wheat flour. No gluten cells are seen, but there are numerous granules unaffected by iodine, and turned red by carmine (albuminous matter). The microscopic examination shows starch granules free and in bundles, held together by the cellulose. The larger corpuscles are probably those of wheat." I have adopted this description of Dr. Fowler, although I am inclined from my own observations to regard the preparation as merely barley flour.

CLASS II. LIEBIG'S FOODS.

	8. Mellin's.	9. Hawley's.	10. Horlick's.	11. Keasbey and Mattison's.	12. Savory and Moore's.	13. Baby Sup, No. 1.	14. Baby Sup, No. 2.
Water	5.00	6.60	3.39	27.95	8.34	5.54	11.48
Fat	0.15	0.61	0.08	None	0.40	1.28	0.62
Grape-sugar	44.69	40.57	34.99	36.75	20.41	2.20	2.44
Cane-sugar*	3.51	3.44	12.45	7.58	9.08	11.70	2.48
Starch	None	10.97	None	None	36.36	61.99	51.95
Soluble carbohydrates	85.44	76.54	87.20	71.50	44.83	14.35	22.79
Albuminoids	5.95	5.38	6.71	None	9.63	9.75	7.92
Cellulose, gum, etc	.....	.....	.....	.....	0.44	7.09	5.24
Ash	1.89	1.50	1.28	0.93	0.89	Undet.	1.59

The first three are dried foods, in brown or granular masses, and very sweet; the Mellin's food looking and tasting very much like pulverized candy. Their aqueous solutions, besides this sweet, had an after taste of alkaline salt. Under the microscope Horlick's food exhibited very few starch granules, some cellulose, hairs of wheat, but mostly dark bundles of entirely unrecognizable granular matters, probably converted starch. Mellin's food goes almost entirely into solution, and I failed to recognize under the microscope the minute irregular granular matter left behind. The materials sent to me by the manufacturers of Horlick's food, as representing their regular consumption, consisted of fine white wheat flour not baked, good barley malt, and pure bicarbonates of soda and potash. Singularly enough, the reaction of the Horlick food analyzed was acid; that of the Hawley's food was acid likewise, while the Mellin's food was alkaline.

The analyses reveal certain striking points in connection with these Liebig's foods. The percentage of fat is extremely low, that of grape-sugar very high. In Horlick's and Mellin's there is no unconverted starch, in Hawley's 11 per cent. In Mellin's there were 5.95 per cent. albuminoids, and in both the others the percentage was very low; that in Horlick's, the larger, being but 6.71 per cent. Hawley's is very light colored, less sweet than the other two, is more finely powdered, and has a smell resembling that of a cereal which has been submitted to torrefaction. The 10.97 per cent. of starch indicates either that the wheat and barley malt have undergone very partial conversion into grape-sugar, or that this percentage of starch has been added in some form after the liquid products of the conversion have been evaporated to dryness.

*These determinations are probably higher than they should be, owing to the influence of dextrine upon the sugar determinations, but if there is an error it is of the same amount in every case.

In my first paper upon this subject (*Sixth Annual Report of the New Jersey State Board of Health*) I fell inadvertently into an error in speaking of Mellin's food. The original table (p. 206 of that article) stated that this food contained 5.95 per cent. of albuminoids, which was correct. Subsequently, in writing out the report, a second table was prepared for convenience in writing out my work, and into this table the clerical blunder was introduced of including the albuminoids, 5.95 per cent., along with the insoluble residue, 3.46 per cent., and putting down the sum, 9.41 per cent. under the latter head, and thus leaving zero for the percentage of albuminoids. This error I am very glad to correct in this place, as well as the misapprehension into which it led me, that the supposed absence of albuminoids indicated the failure to use wheat and barley malt in the preparation of this food. On the contrary, the constitution of the food shows that both these articles were used, together with bicarbonate of potash, and the Mellin's is a genuine Liebig's food.

In fact, the percentage of albuminoids in a Liebig's food has not the same relative significance as it has in the case of Class I., or Farinaceous Foods. This point may be best explained by an examination of the analyses of Savory & Moore's Infant Food and the Baby Sups. These are composed of the materials out of which, by a long and tedious process of conversion, a food like Nos. 8, 9, and 10 is made. This process is as follows: Equal parts of wheat flour and barley malt, together with a certain amount of wheat bran, added, it is said, for the sake of the adherent phosphates and nitrogenous matter, together with one per cent. of bicarbonate of potash, are mixed with sufficient water to make a thin paste. The mixture is allowed to stand at ordinary temperatures for several hours, and then heated to 150° until the conversion of the starch is completed. It is then strained, and the residue pressed and exhausted with warm water. The extract is evaporated *in vacuo* at as low a temperature as consistent with rapidity of working, dried at a higher temperature, and finally, by very skillful manipulation, brought to a finely pulverulent mass, which does not contain sufficient moisture to cake together, and is a most commendable product of technical skill.

By careful selection of highly albuminous wheat and excellent barley, the best results possible can be obtained. What they are, and whether or no the addition of bran increases the percentages of phosphates and other valuable constituents in the extract, I am not prepared to say. I should have very gladly complied with the wishes of manufacturers of Liebig's foods to investigate these matters for them as a matter of ordinary professional labor, but felt that my candid expressions with regard to this subject would not permit me to do so without laying myself open to the imputation of bias. But these explanations suffice to show that the percentages of albuminoids in Liebig's foods have not the same significance as in other classes of infants' foods. The starch has undergone conversion into dextrine and grape-sugar, which, being soluble, pass into the liquid extract, and are evaporated down and pass into the final product. But only that portion of the albuminous paper which is contained in particles so fine

as to pass through the strainers, together with the soluble albuminous matter (and this is especially valuable in the nutrition of infants), is found in the final product. The deficiency in total albuminoids therefore is inevitable, and is an evidence of the genuineness of a Liebig's food. To determine how large a proportion of these albuminoids passes into *solution* would be of great value. To this end, a mode of analysis should be used for these foods, specially designed for them, and this analysis should give not only the varieties of sugar, the dextrine, and soluble and insoluble albuminoids, but the peculiar kinds of extractive. If the virtue of Liebig's foods reside only in their not containing starch, but its products of transformation, gum, and dextrine, together with sufficient bicarbonate of potash to make the reaction of the infant food, of milk, always alkaline, then so tedious and expensive a process would not have to be resorted to in order to obtain a mixture which can be made directly very cheaply. If, on the other hand, the other substances extracted from the grain have an important dietetic value of their own, then the analysis should be directed to ascertain their nature and amount. This has hitherto not been done, nor do we possess the records of physiological experiments bearing expressly upon these points of inquiry.

In Savory and Moore's food this process of conversion has not been effected. Neither can it be when the food is prepared according to directions. These are to put one or two tablespoonfuls of the food into a suitable vessel, mix gradually with two or three tablespoonfuls of boiling water or milk, and cool to the temperature of new milk. The conversion of the 36.36 per cent. of starch cannot be effected so readily. If it be (and it is stated that there is no objection (!) to so doing) heated until it thickens, afterwards removed from the fire and stirred until it become fluid, then a greater amount of starch will be converted than when mixed with boiling water only; but there is no certainty nor probability that, in any case, all the starch will undergo conversion, Neither its composition nor its method of preparation explain, why, when this food is prepared with water, the food is equivalent to mother's food in nourishing power, and why, as the advertisement likewise claims, when prepared with milk only, it has twice the strength. It is certainly not to the 36.36 per cent. of starch that it owes this power, nor to the 9.63 per cent. of the albuminoids of wheat and barley. In fact, this large proportion of albuminoids shows how much less of wheat and barley has actually been employed in the preparation of Savory and Moore's food, than should have been employed in order to obtain a genuine Liebig's food. For, in the latter, the fluid extract of the wheat and barley is used, and the residual matter, which is not beneficial but injurious in the nutrition of children, is strained off, so that the solid matter remaining after evaporation represents an amount of wheat and barley originally taken greatly in excess of its own weight. In Savory and Moore's food, the percentage of albuminoids is that corresponding to the sum of the weights of the ground barley malt and wheat originally taken. These are added together, along with the alkaline bicarbonate, and, when prepared for use, the insoluble albuminoids and the useless and irritating particles, which Liebig directed should be strained off, are allowed to remain in the food.

(To be Continued.)

EDITORIAL DEPARTMENT.

PERISCOPE.

The Treatment of Nævi.

The treatment of these troublesome and disfiguring little deformities constituted the subject of a practical address before the late meeting of the British Medical Association (*Brit. Med. Jour.*, August 18, 1883), by Dr. Wm. Martin Coates. He said:

"The treatment of superficial venous nævi, found by me to be painles, safe, scarless, and certain, but little known, or, to speak more correctly, almost forgotten, was worked out by the late Dr. Marshall Hall. His object was to excite just so much increased action in the growth as to cause deposition of lymph and occlusion of its vessels. He, for this purpose, introduced a cataract-needle at about a line from the circumference of the nævus, and passed it from the point of its entrance to the opposite extreme edge of the growth, keeping it in all its course as near as possible to the surface. The needle was then withdrawn almost to its point of entrance, and pushed again through the nævus at about the sixteenth of an inch from the line of the first puncture, and so on until the line of puncture took a fan-like shape. It is desirable to keep the needle as close as possible to the surface, though, should it penetrate the thin covering of the growth, a piece of adhesive plaster arrests the bleeding immediately.

"There is no need of breaking up the structure of the nævus, as has been recommended. The way in which Nature perfects the cure is very beautiful. A small white spot soon makes its appearance in the centre of the growth; this gradually spreads, and there is left in a few months a spot perfectly smooth, and whiter than the surrounding skin. A few months should be allowed to pass before following Dr. Marshall Hall's advice to puncture again, as I have never found it necessary. One operation has invariably succeeded in the superficial venous nævus. My first case was a boy aged two years, an out-patient at the Salisbury Infirmary. He had a superficial blue nævus, of the size of half a crown, on the left side of his

chest. I operated as above described. He did not come again. A year afterwards, I got his address, and paid him a visit. The nævus had entirely disappeared, leaving in its stead a spot smooth and whiter than the surrounding skin.

"Now that we have safe anæsthesia, there need be no pain in the treatment of such cases.

"When a nævus, venous or arterial, exceeds a thickness of one-sixteenth part of an inch, the needle operation is not applicable. Having failed with it in one or two cases, I looked out for a more effective treatment for what I shall call thick nævus.

"During my investigation of the treatment of bronchocele, cold abscess, and hypertrophied glands, I was struck by the power of hardening, contraction, and subsequent absorption possessed by hypodermic injections of undiluted tincture of iodine, and made up my mind to try it in the first case of thick nævus that presented itself. The following case gave me the opportunity:

"A. E., aged one year, became an in-patient at the Salisbury Infirmary in the year 1861. This little girl had a venous nævus, of the size of a large walnut, situated on the left eyebrow, from which it hung down, completely obstructing vision in the corresponding eye. When admitted, there was a thread seton which had been passed through the centre of the tumor. The patient's mother stated that there had been no improvement. I was induced to try a treatment recommended at that time by some surgeons. It consisted in making several punctures by a small hot iron. These produced little pits in the skin, but no improvement followed. I then threw into the midst of the nævus, hypodermically, half a drachm of undiluted tincture of iodine. Hardening was the immediate result. This was repeated every month. The nævus soon began to lose its color and to slowly shrink. In twelve months it no longer obstructed vision. I then lost sight of the patient. As she lived only seven miles from Salisbury, I visited her in 1869, and found that the nævus had entirely disappeared; but the seton and hot iron had left pits which will, of course, last during her life.

"Since 1861 I have treated all nævi projecting more than a sixteenth part of an inch from the surface in this manner.

"The little operation is very simple. Wood's syringe, with a very fine needle, is the only instrument required. Sufficient tincture of iodine having been drawn into the syringe to fill the nævus, the needle is introduced through the skin at about a line from the circumference of the nævus, and passed to its centre. The piston is propelled slowly home, so as to force the tincture into every part of the growth. This is facilitated by moving the point of the needle into every part of the nævus. On withdrawing the instrument, pressure is made on the small puncture for a few seconds, and the proceeding is complete.

"I have practiced this treatment many times since the year 1861, with complete success. One injection generally succeeds, sometimes several are required. Usually a slight vesication occurs on the surface of the nævus, then a white spot or spots appear, which spread in all directions until the vessels are obliterated; a slight depression of the surface alone remains."

When a nævus is large and growing, Dr. Edmund Owen thinks nothing equal to Paquelin's thermo-cautery. Having been heated to a dull redness, the blade is thrust through the skin in as many places as may be considered necessary, and the point directed to all the regions of the vascular mass—central, deep, and peripheral; each district must be searched out and invaded. The skin-punctures should be made well within the limits of the tumor, as the effects of the cautery necessarily extend beyond the limit of the tissues actually traversed. By the slow and cautious withdrawal of the blade, the small eschars are permitted to remain, sealing the wounded vessels, and thus not a drop of blood need be lost. A few black sinuses surrounded by a ring of skin which has been reddened by the scorching, remain after the operation, and the tumor is found smaller and firm from coagulation having taken place throughout the entire mass. Oil lint may be used as a dressing.

For the next few days the part looks angry and swollen, and is evidently painful. Then a slight amount of sloughing takes place, and, in a few days more, some small clean ulcers mark the dwindling mass. The ulcers heal, and cicatricial contraction taking place throughout the entire mass, determines the process of shriveling. The integument does not perish, except where wounded; but it loses its old purple staining from the obliteration of the vessels which formerly brought to it the unsightly injection.

Some Interesting Cases of Aphasia.

Before the late meeting of the British Medical Association (*Brit. Med. Jour.*, August 18, 1883), the following interesting cases were reported by Dr. Gairdner:

"No case of this kind on record is more striking than that of the first Lord Denman, one of the ablest of the judges and statesmen of his time, the facts of which, though not medically recorded, may be read in an apparently trustworthy narrative of details in the second volume of his published life. Lord Denman had a stroke of paralysis some time before his death, which left him perfectly aphasic as regards utterance; but so far from his power of recognizing and using words being correspondingly impaired, it is said that he was in the habit of reading a great deal in several languages, and indicating most pointedly his approval and disapproval of what he read. He was as unable to write as he was to speak, and thus could not express himself in any way whatever except by gestures; but he lighted upon the plan (apparently spontaneously) of causing his daughters to copy out passages which, in reading, he had strongly approved, in the newspapers and elsewhere, and sending them in a letter to his friends to show that he was still conversant with affairs, and able to take decided views of them."

Another by Dr. G.:

"This case originated in an attack, probably of right hemiplegia, in 1870; and there is a profusion of these automatic or quasi-automatic utterances to which I have already referred, with a great difficulty, not to say always impossibility, of referring to things and persons by name. It is difficult, for want of time, to give many details;

but the point that is of greatest interest at present is that, when he is utterly at a loss about a name, and can neither speak it spontaneously, nor apprehend it when spoken in his hearing, he is able almost invariably from the written symbol to reproduce something like the word in speaking, and then loses it again as completely as ever when the written word is withdrawn from view. Thus, when shown a pen, and when the word was repeated to him again and again, he could not get nearer it than 'petste,' but when shown the word *written*, he at once called it 'pin.' So he called a purse 'poke' and 'foke,' and when pronounced to him, attempted something like 'pats,' but when the written symbol was shown him, said at once and forcibly 'purse.'"

By the same:

"This man has been aphasic, with right hemiplegia, for some years; and he is so far intelligent as to have no disposition to misuse words, or to indulge in unmeaning phrases. He has been partially re-educated, although now and for some time in a stationary condition. He is perfectly good-humored, and a very fit subject for experiment in every way. We are sure that he knows the meaning and use of objects even when he cannot name them; and, in particular, we are sure from his playing at dominoes, working with coins, etc., that he perfectly understands the real significance of numbers. This being so, it is to be observed that he is utterly helpless when asked to name the numbers on a domino, and equally so when a number is named to him, and he is asked to single it out from a lot of dominoes spread out before him. But he has no difficulty at all in counting on his fingers the number of any domino, or of showing a domino corresponding to any number so displayed to him. In this respect, he resembles perhaps the majority of aphasics; but the peculiarity in his case is that, while he cannot realize the number for the spoken word, nor yet from the written symbol, so long as the symbol is a word, he can easily, and apparently with perfect accuracy and intelligence, translate the Arabic symbol into the corresponding number on the domino, and *vice versa*. The word, and the word only representing a number, is a nearly absolute barrier to him in both directions; he is equally word-blind, word-deaf, and aphasic. But he is not in the least in a difficulty about reading or writing a number, provided only the Arabic symbol, and not the word, is made the medium of communication."

By Dr. Broadbent:

"This was that of a man who could converse fluently and intelligently without mistakes of any kind; but, if an object were held up, and he were asked to name it, he failed absolutely. He could not name such familiar objects as a coat and hat; but if it were said of a hat 'That is a coat, is it not?'" he would answer at once, 'No, but that is,' pointing out the hat. He could write either out of his own head or from dictation, but when he had written it he could not read it. It was clear that the word-blindness was only a part of the general loss of the power of naming objects at sight. The explanation of such a case was, that the part from the visual perception-centre to the naming centre was destroyed; and it was interesting to remark that the lesion found after death implicated the left angular gyrus, insulating it from all other parts."

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——"A Contribution to the Study of Neglected Lacerations of the Cervix Uteri and Perineum," is the title of an address read before the Clinical Society of Maryland by Dr. Thomas A. Ashby. The author concludes with the following sound advice; "Prompt attention to such lesions by an early operation, far outweighs the Fabian policy of delay, strategy, and experiment, with washes, pessaries, *et id genus omne*."

——"Myelitis Following Acute Arsenical Poisoning (by Paris or Schweinfurth Green)." This is the title of an article by Dr. E. C. Seguin, which we receive as a reprint from the *Journal of Mental and Nervous Diseases*, October, 1882. The author concludes that—

1. Arsenical paralysis is the expression of a myelitis.

2. This myelitis approximates the type known as polio-myelitis in so far as the symptoms are chiefly motor; that the paralyzed muscles undergo some atrophy, and exhibit the degeneration reactions to electrical currents; that the bladder is never palsied; and that in animals the ganglion cells of the anterior horns are extensively diseased.

3. There is usually more than polio-myelitis, as shown by Popow's *post mortem* findings, and by the presence in living human subjects of pains in the nerves and muscles of the affected limbs, and by the occurrence of actual anæsthesia.

4. Consequently it might be better to speak of arsenical paralysis as due to diffused central myelitis, with special involvement of the anterior gray matter.

5. Whether this myelitis is strictly arsenical, *i. e.*, caused by the direct effect of the arsenic on the tissue of the spinal cord, or whether it is produced (as are many forms of myelitis) by the irritation of peripheral nerves (cutaneous, intestinal and gastric nerve-endings), is a question which cannot at present be definitely solved, but which presents an interesting field for future research and speculation.

——"Notes in Ophthalmic Practice" is a small illustrated pamphlet by J. B. R. Purnell, M. D., of Snow Hill, Md.

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DRUGLESS THERAPEUTICS.

As an evidence of the fact that hygiene is receiving some share of the attention which its great importance demands, may be noted an article in a late issue of the *British Quarterly Review* by Baptist Croft, B. A., entitled "The Relation of Drugs to Medicine."

While the excellent article is slightly marred, as so many good ones often are, by its author taking extreme views of his subject, yet we cannot but agree with the view that day by day the profession is more and more realizing the fact that it is but the handmaid of nature, and that the most successful physician is usually he who, recognizing the prerogative of nature in the curing of disease, hesitates about the use of drugs until nature plainly and in unequivocal terms asks him for the assistance that she requires to enable her to restore the disordered system to its normal condition.

It is a comparatively rare occurrence for a physician to prescribe anything more than a mere placebo on his first visit to a patient, unless he finds some very decided symptoms, and it is rapidly becoming usual to hear our greatest teachers advise their students to use as little medicine (drugs) as possible.

We have to-day in our materia medica even more drugs than we had fifty years ago; therefore it is not because we have them not that we use them not, but it is because, having more knowledge and appreciation of nature's laws, we realize that it is her constant endeavor to rectify disordered conditions; we know that, unaided, she will succeed in many cases; in many others but little assistance is required; in a few she must be powerfully aided; while in a certain number, she is so overwhelmed by her antagonist (disease) that no human power can aid her, and she must give way before the fierce onslaught of her enemy.

Hygiene has a wider application than merely the prevention of disease, for it must necessarily include all remedial measures, save the application of *drugs;* it tells of the regulation of diet, of person, and of surroundings calculated to aid nature in her beneficent ministrations.

When we thoughtfully realize the importance of thus *curing* disease by aiding nature, then will we commence to understand how to *avoid* disease by rendering more timely aid, for nature is constantly endeavoring to destroy the causes of disease, and it is only when she is overwhelmed by these causes that she allows them to afflict her children (we here speak, of course, of zymotic diseases).

Thus will a gradually growing system of drug*less* therapeutics lead upwards insensibly by degrees, until it finally lands us on the broad platform of *prevention*, and then will we recognize in all its brilliant effulgence the glorious science of "*Hygiene.*"

THE MEDICAL CAPACITY OF APHASICS.

From a medico-legal standpoint, this question is an important one.

It may happen at any time for any one of us to be called into court and to be asked to testify as to the testamentary capacity of some poor victim of aphasia.

At the best, our knowledge of the pathology of this mysterious condition is very unsatisfactory; it is pretty generally conceded that it is the result of lesion of the third inferior left frontal convolution and of the brain tissue in the vicinity of the island of Reil, but when we have said this, we have told nearly all we know.

Aphasia formed the topic of an interesting discussion in the Section of Medicine, at the late meeting of the British Medical Association. The discussion was opened by Dr. W. T. Gairdner, and was participated in by Drs. Broadbent, Hughlings Jackson, Clifford Allbutt, and others.

Notwithstanding the pre-eminent position which these gentlemen hold in this special branch of our profession, their discussion was barren of any practical results, save in so far as it affords us some sign-posts that may serve to aid us in medico-legal investigations into the mental soundness or unsoundness of aphasics.

A very safe doctrine for our guidance was thus formulated by Dr. Gairdner:

"On the whole, the position he would be inclined to take in a court of law, with reference to aphasics, would be to avoid, as much as possible, being drawn into general discussions, but to entertain the question as one of evidence, whether in the particular case there were available facts, amounting to a presumption of so much mental capacity as to carry the legal inference required. There could be no doubt, for instance, that aphasics would for the most part be responsible in cases of crime. Whether they would be able, in law, to assent to or emit a deed, would depend altogether on the amount of proof that could be obtained as to their being capable of understanding its contents; and this would be difficult, though perhaps not altogether impossible, to obtain in most cases."

CREMATION AS A PROPHYLACTIC.

Whatever may be said about cremation as a means of disposing of the dead under ordinary circumstances, and we must admit that there are two sides to the question, there can be or ought to be but one opinion concerning its great utility in deaths from contagious or infectious diseases.

That bodies dead from such diseases are capable of communicating the disease to the living is universally admitted, and that this property of contagion lasts for some time after death is abundantly proven by some recent observations of Dr. Domingos Friere, of Rio de Janeiro, who has recently reported some experiments in which he has communicated yellow fever to fowls and guinea-pigs primarily by injection of blood from the heart of a deceased patient, afterwards by transmission from one animal to another, and also by confinement of a guinea-pig for five days over earth from the grave of a yellow-fever patient buried a year before. In consequence of his representations of the great peril created to public health by the inhumation of persons dead of yellow fever, the Minister of the Empire has, according to the *Anglo-Brazilian Times*, ordered the Director of Public Works to proceed to the erection of a furnace at Jurujuba, for the purpose of cremating the bodies of those who die there of yellow fever in the hos-

pital, in whose neighborhood, in fact, yellow fever has now appeared among the local population.

If we have the right to prohibit public funerals for persons dead of infectious diseases, (and we do so prohibit, whether we have the right or not), certainly we have also the power to prescribe cremation, when we are taught how exceedingly dangerous to the welfare of the living, the ordinary disposal of such corpses may become.

Let us see to it that we do not neglect this plain warning.

STRANGULATED HERNIA.

At a recent séance of the Soc. de Chirurgie (August 1), M. Trélat reported an interesting and instructive case. A young man, twenty-five years of age, who had been ruptured from infancy, had the bowel descend during an attack of coughing. Taxis was done with and without chloroform, and thirty-two hours after its descent, when herniotomy was decided on, all the signs of strangulation were present.

Mr. Trélat operated without any apparent difficulty; the prolapsed gut was of an ashy color, but when the constriction was removed it soon resumed a red tint, showing that it had been merely congested.

After the operation the patient was better, but the same evening he was taken with an attack of intense dyspnœa with agitation, and succumbed twenty-four hours after the operation. At the autopsy no trace of peritonitis was found; the portion of intestine returned was hardly distinguishable from other portions of the bowel.

The cause of death was pulmonary congestion which had probably existed before the descent of the hernia, and had probably provoked the accident during the efforts of coughing.

M. Berger found in this case an argument for early operation when there is tight strangulation, without prolonged efforts of taxis; it showed also the frequency of death in such cases from pulmonary complications.

AN INTERNATIONAL SANITARY COMMISSION.

A very wise suggestion was that made by Count Andrassy to the Governments represented at the Vienna Conference in 1874, that there should be an International Sanitary Commission charged with the discussion and investigation of diseases of common European danger, but like many other very valuable suggestions, it has been allowed to die of inanition.

When we recognize how easily disease may be carried, and how utterly regardless it is of the real or imaginary international dividing lines, we must perforce realize how comparatively insignificant will be the wisest *national* sanitation when compared with the labors of an intelligent *international* sanitary commission, and we cannot help but believe that were such a body in active existence, we would have it in our power to control most effectually the origin, growth, and transportation of epidemic diseases.

Since our country is the *refuge* of the world, such a suggestion, *pushed* to a reality, would come from us with singular appropriateness. Let us trust that this suggestion will not fall on barren soil.

THE NATIONAL LONGEVITY UNION.

An association has been formed in Erie (Penna.), bearing the title of our editorial, whose ostensible purpose is to promote a knowledge of hygiene.

Our information concerning it is gained from the public press, and we cannot, therefore, say accurately whether it really is what it seems to be or a clever insurance scheme.

But this much we can and do say: If it is not what it purports to be, such organizations are just what we need.

Organized effort is always more productive of results than individual exertion, and while a few good and noble men are endeavoring to enlighten their fellow-creatures in the grand science of *prevention*, their efforts have not met with very marked success among the public, owing to the apathy of the masses on this all important subject.

Such organizations among the people are well calculated to promote an interest in the science of hygiene and should receive warm encouragement.

TRAUMATISM AND TUBERCULOSIS.

In a recent communication read before the Soc. de Chirurgie, M. Verneuil produced a record of a number of cases where traumatic lesion or a surgical operation induced the development of tuberculosis or aggravated the malady when already present.

He considers that the general perturbation, induced in the system by a traumatism, awakens a predisposition to the disease, which, up to that time, had remained hidden. In this way, in certain cases, it would seem that the traumatic lesion was the great factor in the production of the disease.

This view of the subject was contested by M. Trelat, who admits that an operation of any gravity is not of course justifiable in any case of tuberculosis where the viscera are affected, but in cases where the disease was entirely external or where the operation was a minor one, even with the internal organs affected, surgical interference could be resorted to without danger.

CHRONIC GONORRHŒAL URETHRITIS.

M. Robert Jamin, a distinguished pupil of M. Gosselin, recently published an important memoir on this subject. The author, following the opinions of the learned professor, confirmed by personal researches, establishes the duality of the urethra, a sphincter situated at the membranous portion dividing it into an anterior and posterior tract. This fact is of great importance, as gonorrhœa in many cases affects only the anterior tract, and may reach the posterior portion through injudicious treatment.

It is for this reason that MM. Jamin and Gosselin so strongly combat the treatment by urethral injections, for, by their use, the sphincter is sometimes forced and the disease communicated to the posterior section of the urethra.

NOTES AND COMMENTS.

The Birthplaces of Yellow Fever.

Dr. Domingo Friere, of Rio de Janeiro, who was commissioned by the Brazilian Government to inquire into the subject of yellow fever, has made a report, from which we extract the following valuable information as we find it in the *Canada Medical Record*, July, 1883:

"During a visit that I paid to the cemetery of Jurujaba, where all are buried who die in the Marine Hospital of Saint Isabel, I gathered a handful of earth at a depth of one foot from the surface, over the grave of a person who had died, about a year previously, of yellow fever. This earth did not differ in color or odor or any external feature from the surrounding earth; but by examining a small quantity with a microscope magnifying 740 diameters, taking the usual precautions to avoid error, I found myriads of microbes, exactly resembling those met in the vomited matters, urine and blood, and other organic liquids from the bodies of those attacked by yellow fever, viz., the cells of *cryptococcus zanthogenicus* in various stages of growth, from the size of a black speck, difficult to recognize in the field, up to round corpuscles, more or less large, strongly reflecting light, some being grey, while others were black, and surrounded by a fringe or areola of that color. Many of the organisms moved spontaneously. There were yellowish masses marked by granulations that came out clearly in the field, likewise masses made up of the coloring matter of the cells; we also saw specks that were entirely black, being the remains of the *cryptococci*.

"I also observed vibrioles. They moved with rapidity. These observations were verified in all their details by my assistants, Messrs. Chapot, Augustus Cesar, and Carminhva, showing clearly that the germs of yellow fever perpetuate themselves in cemeteries, and that cemeteries are birthplaces for the evolution of new germs, destined to devastate our city (Rio de Janeiro)."

Diarrhœa from Milk.

Dr. Basil G. Morison, in an address before the British Medical Association (*Brit. Med. Jour.*, August 25, 1883), related seven cases. The stools were green and rather loose or watery, sometimes pale, with white pieces of curd in them. The history of the cases was briefly as follows:

Case 1. O., aged 3 months; Swiss milk, one drachm in half a pint of water, given irregularly; bread food. July; weather close.

Case 2. H., aged 6 months; Swiss milk, one drachm in half a pint of water; fine oatmeal. July; weather close.

Case 3. H., aged 5 weeks, strumous; vomiting from birth; cow's milk tried in vain; Swiss milk,

one drachm in half a pint of water. July; weather close.

Case 4. M., aged 8 months; boiled milk and water, equal parts. May; weather hot, thundery.

Case 5. W., aged 7 weeks; cow's milk and water, equal parts; breast. July; hot weather.

Case 6. B., aged 3 weeks; cow's milk and water, one to three; Swiss milk, two drachms in half a pint of water. July; weather hot.

Case 7. C., aged 7 months; cow's milk and arrowroot, and Ridge's Food. September, 1880; a hot month.

The treatment was as follows:

1. No food but milk was allowed (but weak beef-tea in one case).

2. If the mother's milk were at fault, cow's milk was used.

3. Cow's milk, one part in two, three, or four of water, or soda water, was given, according to the age of the child.

4. When Swiss was used, half a drachm to one drachm was given in a half pint of water.

5. The milk was ordered to be fresh, and the bottles clean, and a change of bottles to be provided. For medicine, a cholagogue was given in small repeated doses:

℞.—Pulv. rhei,	gr. ½–j.
Euonymin,	gr. ⅛.
Sodæ bicarb,	gr. j–ij.

The result of this treatment was steady improvement; the stools becoming normal in color, frequency, and consistency. Recovery occurred in all cases but one (Case 3), in which the stools became normal; but the child died of persistent vomiting, which had gone on from birth.

Pop-Corn for the Vomiting of Pregnancy.

Apropos of an article which originally appeared in our pages, Dr. H. v. Sweringen thus writes to the *Obstetric Gazette*, August, 1883:

"Six or eight months ago or more, I noticed in one of my journals, I cannot now remember which one, and I have not the time at present to look it up, a short article by some physician whose name I also fail to recall, recommending ordinary pop-corn as an efficient remedy in the vomiting of pregnancy. If I had not seen it under the circumstances I will presently relate, I would undoubtedly have given it but a passing notice, inasmuch as it did not strike me favorably at first sight.

"If its worthy advocate had fixed it up in some kind of 'scientific' shape, or infused into it a little Latin, as, for instance, 'cornum explosivum' or 'cornum poppum' or 'poppum cornum,' it might have attracted my attention under *any* circumstances, but bare 'pop-corn,' simple, harmless, innocent '*pop-corn*' as a high-toned therapeutical remedy among high-toned, scientific physicians was too much, 'too utterly too too' for a physician of my cloth and attainments.

"But seriously, it proved to be a God-send to me and my patient (more particularly the latter), having had at the very moment one of the most intractable cases probably that ever occurred. I had exhausted the usual remedies employed in this distressing ailment, and was about to cauterize or do something to the os uteri when my eyes accidentally fell upon the above named remedy. To make a long story short, it acted *marvelously*, not only in the case referred to, but in three subsequent cases; in fact, in *every* case in which I have prescribed it."

Depilatories.

Having been asked by several correspondents for a safe and efficient depilatory, we reproduce the following from the *Druggist*, September 1, 1883:

The strongest and most reliable preparation of this kind is, perhaps, the hydrated calcium sulphide obtained by supersaturating a thin paste of freshly-slaked lime and water with sulphureted hydrogen gas. For this purpose sprinkle over 100 parts of good quicklime about 50 parts of hot water, and when slaked triturate with 200 parts of cold water. Now place into a suitable flask and pass into it the hydrogen sulphide generated from 300 parts of sulphide of iron and 200 parts of dilute sulphuric acid gradually introduced into the generator. This preparation must be immediately placed in small vials and securely sealed; but even then it will lose its virtues after a few weeks. This preparation, the composition of which is theoretically H_2CaS_2+aq., was originally recommended by Bœttger, but is sometimes known as Martin's depilatory. The paste is to be spread over the hairy skin to the thickness of a sixteenth of an inch and allowed to remain for ten minutes, when it is removed with a wet sponge. If allowed to remain too long, ugly sores are apt to follow.

Another depilatory, known by the Turkish name Rhusma (being employed by the voluptuous beauties in the harems, where etiquette demands *complete* nudeness of the body with the exception of the head, from which the hair is not removed), is composed of,

Quicklime	50 parts.
Starch	30 parts.
Orpiment	5 parts.

This is converted into a paste with water, and employed like the former preparation.

Habitual Constipation.

In the *Brit. Med. Jour.*, June 2, 1883, Dr. T. Rowing Fendick says:

Looking at it that, as a rule, constipation is due to want of tone in the muscular coat of the bowel, and to diminished glandular secretion, I usually prescribe a pill composed as follows:

℞.	Ext. aloes soc. aquos.,	gr. ij.
	Ext. nucis vomicæ,	gr. ss.
	Ipecac. pulv.,	gr. ss.

M. Ft. pil. To be taken each day with dinner.

Strict orders must be given to the patient never to neglect going to stool at a fixed hour daily. This prescription usually answers within a month. Another remedy, not so nice, but nearly as efficacious, is a drachm of castor oil, the first thing each morning, persisted in for some weeks. Should these remedies fail, a small enema, of about half a pint of thin gruel, used every morning, will often overcome the difficulty; but there must be the attempt at defæcation made at the same hour each day. By this practice, the bowel at last, so to speak, recognizes the necessity of waking up from its torpor, and, aided by the medicines, regains its lost tone.

Cellulose as a Surgical Dressing.

Many as are now our articles for surgical dressings, Dr. Fischer, of Trieste, proposes in the *Zeitsch. f. Therap.*, that we should add cellulose to the list. He claims for it the following advantages:

1. It is absolutely free from substances capable of exciting putrefaction.
2. It has a very low specific gravity.
3. It produces neither eczema nor erythema upon the epidermis.
4. It retains moisture and heat perfectly for more than twenty-four hours.
5. It never adheres to granulating wounds on the surface of the skin.
6. It adapts itself perfectly to the outline of the place of application.
7. It is much cheaper than other materials heretofore used for similar purposes.

Iodoform in Chronic Pulmonary Diseases.

M. Semmola, in a memoir in the *Gazetta Internaz. delle Scienze Med.*, makes the following observations:

It is known that iodoform taken internally is eliminated by the respiratory organs, whence originated the hope that it might have a topic action in such diseases as cheesy pneumonia, bronchial catarrhs, and bronchiectasis.

Under its influence, expectoration rapidly diminishes, cough is less troublesome, and the products of bronchial secretion, including pulmonary detritus, are disinfected.

The fall in temperature may be in great part due to the local antiseptic action on the absorbed putrid products. The daily dose to be administered should be determined by the tolerance of the individual for the medicament. Where it is not well supported by the stomach, inhalations of spirit of turpentine with iodoform in solution may be used.

How Do Parasites Produce Disease?

Dr. George Sutton thus answers this question in a paper read before the Indiana State Medical Society (*Cinn. Lan. and Clinic*, July 21, 1883):

1. By producing poisonous compounds, as septicæmia, from the decomposition of tissue.
2. By changing the composition of the blood, as seen in typhus fever, yellow fever, plague, etc.
3. By the destruction of tissues in syphilis, cancer, etc.
4. By irritation of the nervous system, as convulsions arising from worms, etc.
5. By consumption of nutriment, consequently draining the vital forces from the system, as when 20,000,000 trichina invade the human body.
6. By thrombus of small arteries, as seen in anthrax, etc., etc.
7. By local irritation, producing local inflammation, as we see in scabies and ring-worm, etc.

The Removal and Reproduction of the Spleen.

Prof. Pio Fora read a paper on this subject before the Italian Medical Association in 1882, and the *London Med. Record*, July 15, 1883, gives us his conclusions as follows:

1. Re-formation of the spleen after removal is not proved by experiments.
2. Many pathological facts in the spleen may be explained without assuming its new formation.
3. The production of nodules is independent of the state of the spleen and of the osseous marrow.
4. The spleen may be re-formed when it is partially removed.
5. The spleen is virtually only hæmatopoietic.
6. Even in the physiological state, nodules are found in the omentum, while no pathological alteration of the spleen and hæmatopoietic organs exists at the same time.

Milk and Eggs in Insanity.

The *Practitioner* for August, 1883, tells us that Dr. Clouston, in the Annual Report of the Edin-

burgh Royal Asylum for 1882, draws attention to the good effects produced by the liberal use of milk and eggs in the case of nervous patients. He gives to such patients as many as a dozen of eggs, and as much as six or seven pints of milk a day. When this form of treatment is associated with plenty of walking exercise in the open air, a great increase of weight often takes place. "A gain," he says, "of two or three stone is quite common, and usually there is an immense advance along with this in nervous stability, in contentment and in self-control, even if a complete recovery does not take place."

Marriage in Neurotic Subjects.

In a paper, by Dr. G. H. Savage, in the *Journal of Mental Science* for April, 1883, the following is found:

"To sum up the whole matter, one would say that marriage would relieve a certain number of hysterical cases, and that is justifiable in a certain number of cases who have suffered from insanity. I should never advise marriage as a cure for hysteria, without warning the friends that it might or might not be beneficial, and that the good depends not only on the marriage, but on so many other circumstances. I should not oppose every marriage of those who had been insane, provided only one of the contracting parties had been so, and the other was of good physical health and not of nervous disposition."

The Elastic Bandage in Elephantiasis Arabum.

Before the Imperial and Royal Medical Society of Vienna, Professor Albert showed a case of elephantiasis Arabum of the leg, which had been treated since January 5 with elastic bandages, and where the circumference had fallen to the following extent: Under the knee, from 71 centimetres (28 inches) to 20 centimetres (nearly 8 inches); the greatest circumference of the calf, from 85 centimetres (33½ inches) to 32 centimetres (nearly 13 inches); round the ankle, from 83 centimetres (32½ inches) to 29 centimetres (11½ inches). Walking had been rendered much easier, and for the last few days there had been no further diminution in size.

An Experimental Study on the Identity of Callus and True Bone.

Dr. George E. Shoemaker wrote his graduation thesis on this subject (*Univ. of Pa.*, 1882). The *Med. Times*, July 28, 1883, contains an abstract of the paper, which concludes as follows:

Finally, then, as a result of the present study, we arrive at the conclusion (1) that in the repair of fractures true bone may be reproduced; (2) that under unfavorable conditions the process may be seriously modified or arrested in various stages; but (3) that there is a tendency to true bone-formation in every case.

CORRESPONDENCE.

Ergot as an Assistant in Parturition.

EDS. MED. AND SURG. REPORTER:—

The author of the paper in your issue of Aug. 18, on "The Use of Ergot," recognizing the legitimate function of criticism, promulgates some views which challenge the correctness of the opinions concerning the action of this drug, which have received the sanction of the most eminent medical writers, and the assent, as I believe, of the great body of medical practitioners.

Passing, for the present, the extraordinary construction of the language in which these views are set forth, I proceed to notice some of the principles involved in these utterances.

The following particulars are affirmed:

1. "The action of ergot in any reasonable dose is not, as often stated, *persistent*, seldom longer than any strong pain, nor do the fibres contract more than in natural labor."

2. "The effect of carefully-watched doses, say thirty drops each, every half hour, is not *continuous* or *persistent contraction*, but can be made to imitate strong and regular labor. I have seen the best effects, not as a rule, however, in the first stage, and continued with care gradually through and with steady pains and perfect rest very often in the third stage."

3. "The pains *prepare* the parts for the passage of the child, not the *intermission*, as I see stated. The dilation, the secretion, the adaptation, are secured by the *pressure* of the *fœtal head*, which itself is moulded more or less by the same process."

4. "Delay, not ergot, is the cause of death to the fœtus."

Noticing the propositions in their natural order as they refer to the course of parturition, there is, so far as I know, no adequate motive for intervention in the first stage of natural uncomplicated labor. Should the pains be infrequent and weak, and the touch reveal an os but little dilated, and there be no motion of the amniotic membrane, the case may safely abide the occurrence of true labor pains. The exhibition of morphia, to weaken the sense of pain, will not delay the course of the labor. It is certainly not well at this stage that the patient should be considered to be in labor; but rather in the preparatory period.

As to the proposition that "the pains *prepare* the parts for the passage of the child, not the intermission, as I see stated;" and that "the dilatation, the secretion, the adaptation, are secured by the *pressure* of the *fœtal head*," I am led to wonder at the entire absence of any reference to "the bag of waters," which is the efficient instrument in forcing dilation—a safe and most gentle one; as, between it and the os, there is interposed

a layer of amniotic fluid. Here it may be proper to say that should the "bag of waters" burst prematurely, and the "pressure of the fœtal head," with its covering of crisp hair, be constantly forced against an unyielding os, it may become extremely hot, and as tense as whipcord. That the "pains" at this crisis "prepare the parts for the passage of the child," is untrue; on the contrary, freedom of contact, for a certain interval, of the fretted os with the irritating scalp, does permit the irritation and spasmodic contraction to pass away, and dilation and progress in the labor results.

Proposition 1 affirms that "The action of ergot in any reasonable dose is not, as often stated, *persistent*, seldom longer than any strong pain." As it is directed to be taken "every half hour," we are led to consider the length of a parturient effort. One, a half hour long, including the period of rest, would be considered to be a very long one. Should they be less in duration, the remedy, if its action affect one contraction only, should be given correspondingly often. As the whole period is often comprised within a space of ten minutes, the patient would be left two-thirds of the time without its help. Should its action influence all the pains experienced during the half-hourly intervals of its exhibition, then is its effect "persistent;" and the "*steady* pains" are not followed by "perfect rest."

As this result was described as occurring "very often in the *third* stage," it would seem that the several stages of labor are not entirely clear and definite in the author's mind.

Reverting to proposition 3: "The pains *prepare* the parts for the passage of the child, not the *intermission*." I may remark, in a general way, that rest from labor is as essential to its continuance as the effort itself. This is a principle of the widest application. The plowman relaxes his labor and that of his team amid-field; the mower pauses at the end of his swath; the laborer rests upon the implements of his toil; all find recuperation in sleep. To the parturient, the momentary freedom from pain, brings "tired nature's sweet restorer." As compared with the intense struggle of the throes of labor, it is "ease." No one, who has seen the parturient expend, for the time being, the last available effort; and has witnessed the renewal of energy, after a brief interval of repose, can doubt that the "intermission" is as necessary and useful in forwarding "the passage of the child," as the effort which preceded it. The final sentence declares: "It is the delay that causes sphacelus, perineal rupture, or fistula. While I believe that, in the whole course of my obstetric practice I have given nature the fullest chance, assisting her by ergot when she needed it, substituting the forceps when they were deemed preferable, it has not been my fortune to have either evil as an accompaniment or sequel.

Proposition 4: "Delay, not ergot, is the cause of death to the fœtus." This may be the result in either case.

E. T. Blackwell, M. D.

Paterson, N. J.

A Peculiar Case.

Eds. Med. and Surg. Reporter:—

On the 21st of February, 1849, visited Joshua Chandler, aged 69 years, a strong healthy man, but almost an idiot, in consultation with Dr. Benjamin J. Pennock.

History.—Twelve days previous (the 9th inst.), while hauling wood, had fallen over the brush, but did not notice any hurt. On the evening of the next day, the family observed that the outside of his left leg was swelled and of a dark color, extending from the knee to the ankle. It felt hard, but was neither sore nor painful.

Under family treatment the general swelling and discoloration soon disappeared, leaving a well-defined, prominent tumor, some four inches in diameter near the middle of the leg.

On the 17th, Dr. Harvy saw it in this condition: It was soft and fluctuating. He advised it should be opened. The next day Dr. Pennock advised the same course, but neither of them appeared willing to risk it. It was opened by a *bleeder*, with a spring lancet. A jet of dark blood followed, and continued without much reduction of the tumor. After bleeding half a pint, it was stopped with a compress and roller without difficulty.

On the 19th, Dr. Pennock made a more free puncture, and was a good deal disconcerted by the large stream of pure venous blood that followed. It required the horizontal position and a more careful dressing to stay the bleeding.

Present Condition.—On removing the dressing the puncture was healed; the tumor was little changed in size, and still tense and elastic; the limb and the whole man appeared otherwise healthy.

Diagnosis.—Was it *aneurismal?* It had succeeded a supposed *injury;* it was seated over the anterior tibial *artery;* it contained *blood*, and it had continued full and tense for *ten days;* but the blood was *venous;* there was entire *want* of pulsation or aneurismal *sound;* it was exterior to the *fascia*, and there had been no *adequate* injury to reach an artery so well protected; the circulation in the legs, arterial and venous, was otherwise *uninterrupted:* the tumor was obviously *venous*, having formed a persistent *cellular* sac, a sort of VENOUS FALSE ANEURISM?? The compress and bandage were re-applied, to await indications.

On the 5th of March, met Drs. Pennock, Seal, and Townsend. There has been little change, except the tumor is a little flattened and more firm, indicating coagula, and the covering is obviously becoming thinner by absorption. It was decided to make a test incision, and then to meet results. A free puncture was followed by a gush of dark grumous blood. A probe passed readily through the coagulum, which was broken up by the instrument, and much of it pressed out. A band round the thigh increased the bleeding.

Two procedures presented: To lay the sac freely open, or to continue the compression. We adopted the latter.

The orifice was closed, a hard narrow roll was laid cross-wise just below the tumor, the whole covered with a graduated compress and a firm roller applied from the toes to the knee. This dressing was continued for two or three weeks, during which time the sac appeared to be emptied by absorption, and obliterated by adhesion. The cure was complete.

If such complete and persistent sacs do often occur in the cellular tissue from venous infiltra-

tion, they have not come to my notice. Should they occur in some other localities, the diagnosis might be more difficult. Prompt ablation of the coagulum would have been more speedy. It might have been more hazardous.

Toughkenamon, Pa. E. MICHENER, M. D.

Paralysis of the Pneumogastric.

EDS. MED. AND SURG. REPORTER:—

On Friday, July 13, I was called to see my brother, a farmer, thirty-three years of age. History of case as follows: On Tuesday preceding he felt as if he had a "cold," with a little swelling in the throat; but not enough to stop work. Wednesday, not feeling any better, "took a sweat," which brought about much improvement in the symptoms of a cold. Went out in the afternoon and raked hay. Upon attempting to swallow the first mouthful at breakfast on Thursday morning, found it impossible to get anything but liquids down, and these produced much choking. No soreness about the throat at this time. Nausea and vomiting occurred Thursday night, and continued at intervals until I arrived, at nine o'clock p. m. Friday. Then I found him with pulse and temperature normal. Respiration labored. Appearance of pharyngeal mucous membrane normal. To stop nausea and vomiting, gave hg. sub. mur. gr. iij., sodæ bicarb. gr. v., which accomplished the desired result and produced mild catharsis in six hours. Also gave belladonna to improve respiration.

Saturday morning the power to swallow fluids was entirely abolished. Breathing somewhat better. Called Drs. Huntington and Haviland, of Rochester, and O. D. Greene, of Warren, in consultation. Treatment continued, with nutrient enemeta.

Sunday found patient suffering extremely from thirst, which was very much mitigated by injections of one-half pint of water and milk every hour. Being very hungry, patient was fed totally with stomach-tube.

On Monday, the respiration became irregular. When I arrived at six p. m. on Saturday, pulse was 110, temperature 101° F., breathing irregular, and sighing, with intervals between inspiratory acts, in which the patient seemed to forget to breathe, but would resume upon being told to do so. Pupils, which until now had been normal, were contracted, but responsive to light; mind wandering at times, but seemed perfectly clear, if patient recalled to himself; very restless, with constant moving from one side of bed to the other. At eleven o'clock p. m. restlessness and jactitation so extreme, gave one-tenth gr. morphia and one-forty-eighth gr. atropia subcutaneously. Rested for about one hour, but no sleep. Respiration soon became more and more irregular, until at 2.30 a. m. Tuesday, decided asphyxia took place; the face suddenly becoming cyanosed. Patient died at four o'clock a. m. from failure of the respiration, the heart's action remaining strong and steady until the last.

If any reader of the REPORTER has seen a similar case, and I have no doubt but that some of them have, I should like to hear from them through these columns, giving such light upon the subject, both theoretical and practical, as they may possess. My version of this case is as follows: At first the pharyngeal branch of the pneumogastric nerve, which is the outer nerve of the pharynx, was paralyzed from congestion of the nerve-sheath. This congestion, extending its influence to the main trunk, *i. e.*, the pneumogastric, paralyzed it, and death resulted from such paralysis of its respiratory function, which gives to the air-cells of the lungs the perception of the necessity of breathing. The cause of the congestion of the nerve I believe to be the cold air striking the neck while the patient was raking hay with the shirt collar open and turned back after taking the sweat.

[Blisters were applied over the pneumogastrics.] L. M. GREENE, M. D.

Bethel, Vt., August 15, 1883.

NEWS AND MISCELLANY.

Decrease of the Population of the Hawaian Islands.

The Honolulu correspondent of the *Boston M. and S. Jour.* thus comments on this subject:

The remarkable decrease in the native population of the Hawaiian Islands since the visit of Captain Cook in 1779 affords food for thoughtful study. Cook asserted that there were 400,000 people in the entire group, but it seems probable that this estimate was too high, and that really there were not more than 200,000. In a century, this dense population has dwindled to 40,000, an annual decrease of nearly two per cent.; and as the same exterminating causes continue to act, the probabilities are that the Kanaka will become extinct in twenty or thirty years more, or at least be as much of a curiosity in his own islands as the red man is upon our own Atlantic shores.

This slow but sure extinction of the Hawaiians has been the result of numerous causes, many of which are and have been easily remediable. It is more than probable that the diminution had begun before the time of Cook's first visit; at all events it has been in active operation ever since.

When the Boston missionaries first settled among the natives they found infanticide practiced to an alarming extent, mothers deliberately smothering, strangling, or burying alive their newly born. Mrs. Judd, the wife of that Dr. Judd to whom the Hawaiians owe their present form of government, mentions the frightful extent to which infanticide was carried in 1828, and records a case under her own observation where a mother was known to have buried alive eight out of ten children born to her. Civilization, however, has somewhat refined the native taste, so that abortion has superseded the more barbarous method, and the manner in which they induce it is well worth relating. The unfortunate woman is placed upon her back on the floor, and the officiating *Kahuna*, or medicine woman, taking a stone in either hand, proceeds to knead and squeeze the abdomen, endeavoring to get the uterus between the stones. Next she gets upon her victim's abdomen with her knees, and walks all over it so to speak. This violence generally brings on flooding, and in a short time abortion, but, alas, frequently at the expense of the patient's life, though in one case which was cited to

me dumb-bells replaced the stones in the operation, great violence being done, and yet the woman went on to term, and gave birth to a healthy child.

Syphilis spread rapidly among the natives after the visits of the early navigators, and is said to have impregnated the entire race, destroying many, and rendering hosts sterile. Immorality, the curse of this ethnic stock, has, of course, greatly promoted the extension and perpetuation of syphilis, and materially increased the number of barren women.

Leprosy, introduced by the Chinese about thirty years ago, has destroyed many of the Kanakas, and is steadily extending its loathsome and deadly hold.

The Medical Aspects of the Russo-Turkish War of 1877-78.

The *Lancet* tells us that it has been reserved for a German staff officer, Major Knorr, to delineate the features of the above campaign as regards the provision made by the Russian military officials for the care and medical treatment of the sick and wounded. In his recently published work on the subject, he attacks the narrow-minded bureaucratism of the Russian officials, and brings forward certain important facts in support of his assertions. Out of a combined force of 933,000 men, the Russian army lost 81,166 by disease, and 36,-455 by wounds received in battle, etc. In the war of 1870–71 against France the German army lost by external injuries 28,628 men, while only 12,-115 succumbed to various forms of disease. This result (taking into consideration the facts that the total Russian forces numbered 1,113,254 men, and that the two campaigns were of similar duration) is considered to indicate that many lives were saved during the earlier campaign which would have been lost had the medical system been as inefficient as was that of the Russian army during the war against Turkey. Apart from the mortality, the very high rate of illness is commented upon. According to the figures quoted by the *Cologne Gazette*, each soldier in the entire Russian army must, on an average, have been twice in hospital during the continuance of the war. If the benevolence of the Russian public and the action of the Red Cross Association had not assisted the medical organization, the results would have been still more deplorable.

Is it any Wonder they have Cholera?

The *Med. Times and Gaz.*, July 14, 1883, says:

The *Times* correspondent in Egypt brings serious charges of neglect of sanitary precautions against the Government there. Travelers, he says, reported some weeks ago that the stench of Damietta was observable ten miles away; whilst the English residents at Mansourah months ago stated that the passage of dead animals down the river, five or six at a time, was evident to both eyes and nose. Until a few days ago Damietta was without doctors, medicine, or disinfectants. Prior to putting a cordon around the place, 10,000 people attending the fair there were allowed to disperse through the interior. Dr. Mackie is stated to have applied, through the Consulate, to the Principal Medical Officer for information of the simplest description, and received a reply to the effect that that officer had no information. The same correspondent suggests that England should insist upon an efficient supply of doctors and medicines being sent to Damietta; the inhabitants should be removed and camped out in the desert, and kept within a strict cordon until the town has been purified—if necessary, by burning the infected houses.

Extraordinary Feat.

We take the following from the *Brit. Med. Jour.*, September 1, 1883:

An extraordinary incident, in which an athlete showed great presence of mind and unusual muscular strength, happened at Cranachan farm, near Dundee, the other day, and is reported in the *Dundee Advertiser*. Mr. Archibald Macdonald, one of five brothers who occupy the farm, was going over his land accompanied by the shepherd; and, when they were passing through a field in which cattle were grazing, a bull gave them chase. The shepherd ran and left his master to his fate. Mr. Macdonald could not run, he having suffered much from rheumatism, and being now obliged to use crutches. The bull approached and began to attack him, he doing his best to keep him at bay with the aid of his crutches. As good luck would have it, Mr. John Macdonald, an elder brother, hearing cries, ran to the rescue. In his hurry, he forgot to bring any instrument with him with which to fell the brute; but it occurred to him that if he caught the bull by the horns, he might keep him from doing more mischief till help arrived. Seizing the enraged animal by the horns, and using them as levers, with one supreme effort he gave a sudden twist to the head, dislocating the neck by his jerk, and, in a moment, the bull fell helpless at his feet. Mr. John Macdonald was, at one time, champion athlete of Scotland.

Pasteur's Egyptian Cholera Commission.

A Paris correspondent of the London *Daily Telegraph* states that M. Pasteur, the eminent physician and scientist, who was largely instrumental in procuring the despatch of a French medical expedition to Egypt to examine into the causes of cholera and the nature of the disease, has received reports from the commission which are highly satisfactory to him. The mission believes that the result of examinations it is now pursuing will establish that old accepted theories as to the origin and nature of the disease are greatly at fault. It is hoped the commission will make a report embodying practical suggestions for prevention of the epidemic.

The Autopsy of the Count de Chambord.

The autopsy on the Count de Chambord revealed the following morbid conditions:

Extensive carcinoma of the œsophageal end of the stomach, with stricture of the œsophageal entrance and atrophy of the coats of the stomach. There was also evidence of old-standing Bright's disease of the kidneys, and extensive degeneration of the coats of the arteries, which commonly accompanies that disease, and which has been especially described by Sir William Gull and Dr. Sutton.

American Academy of Medicine.

The annual meeting of the Academy will be held at the New York Academy of Medicine, 12 W. 31st street, New York, on Tuesday, October 9 (three o'clock p. m.), and Wednesday, October 10, 1883.

RICHARD J. DUNGLISON,
Secretary.

Items.

—Vignal (*Le Prog. Méd.*, No. 18, 1883,) finds that the bacillus tuberculosis resists putrefaction for eighteen days.

—Dr. James W. Allan, physician to the City of Glasgow Fever Hospital says that there *may* be a more suitable diet than milk for fever patients, but it has not been discovered as yet.

—The first ovariotomy in Smyrna was performed in May by Dr. Viltore Belleli, at the Rothschild Hospital, on a woman 45 years of age. In spite of very unfavorable symptoms the woman recovered.

—The sweeping of the Paris streets, according to the last official return, costs $1,048,600. The number of persons employed in the work is 3,016, including 820 sweepers, 2,010 auxiliary sweepers, and 186 foremen.

—At a medical examination at Glasgow candidates were asked to write in full Latin a prescription for a good anti-bilious pill, with full directions. One candidate wrote—"Recipe, pilulæ calomelanos compositæ, unam, statim."

—"There is nothing very brilliant about our Bremen dentists," said a lady to a member of the profession in Berlin, "but they are very obliging. If you wish a tooth extracted with gas, they forthwith light the chandelier."

—Mosquito-bites are prevented (according to a correspondent of the *Pharm. Zeit.*) by painting all the exposed parts of the body, at night, face, neck, and hands, with a tincture made of pulv. pyrethri 20, ether acetic 10, spirit 70. Another correspondent recommends oil of pennyroyal 1, and spirit 15. Lavender or rosemary oils, or petroleum, are also spoken of favorably.

—In distributing the prizes awarded to the successful students at the Macclesfield Grammar School, England, the Bishop of Manchester condemned the system of "cramming," which he said was too common in our schools. The Americans had found it to be a false educational basis, and had had to retrace their steps.

—A new building, intended for the cremation of the dead, has been erected in the Campo Verano, in the neighborhood of Rome. It is divided into three parts—the hall reserved for the relatives of the deceased, the furnace, and the catacombs. The increasing dread of infectious disease is expected to lead to a considerable increase in the practice of cremation in Rome.

—Mr. Sandwith, British Consul in Crete, reporting on the production of wine in the island last year, refers to the Greek wines, which are shipped to France notoriously for the purpose of being "manipulated" and re-exported, under the name of claret, at prices which average only seventeen cents a gallon, free aboard ship.

OBITUARY NOTICES.

DR. CHARLES WRIGHT.

Dr. Charles Wright, Senior Medical Examiner of the New York Life Insurance Company, died in London, England, September 2, 1883, of congestion of the lungs resulting from Bright's disease. Dr. Wright was graduated from the Medical Department of the University of the city of New York in 1853. After a few years spent in general practice, he was, in 1862, appointed Assistant Medical Examiner of the New York Life Insurance Company. Upon the death of Dr. Wilks, in 1876, he was made one of the Medical Directors of the company. Since 1877 he has also been one of its Trustees. Dr. Wright was a member of the New York Academy of Medicine and Treasurer of the Board of Trustees. He was also a member of the New York County Medical Society and of the Manhattan Club, and a member and Trustee of the New York Society for the Relief of the Widows and Orphans of Medical Men. Dr. Wright had suffered from Bright's disease about six months. He sailed for Europe on August 22, in the hope of finding relief.

DR. JAMES DOWLING TRASK.

Dr. Trask, who died September 2, was born in Beverly, Mass., in 1821. He graduated in Arts at Amherst College in 1839, and received the degree of M. D. from the University of the City of New York in 1844. Subsequently the honorary degree of M. D. was conferred upon him by the Medical College of Buffalo, N. Y. He settled as a practitioner of medicine in Brooklyn, removed from there to White Plains, Westchester county, some years afterward, and in 1859 he took up his residence in Astoria, Long Island, where he practiced his profession up to the time of his death. For some time past his health was poor, but he continued to attend to his professional duties until within a few days of his death.

MARRIAGES.

GOTWALD—KURTZ.—At York, Pa., on Thursday, September 6, 1883, Dr. D. King Gotwald and Miss Julia B. Kurtz.

HEWSON—CLABAUGH.—At St. Mark's Church, September 4, 1883, by the Rev. I. L. Nicholson, D. D., assisted by the Rev. J. Bloomfield Wetherill, Dr. Addinell Hewson, Jr., of this city, and Miss Lucy Clabaugh, daughter of the late George W. Clabaugh, of Baltimore.

JORDAN—CALDWELL.—At St. Mary's Church, this city, September 4, 1883, by the Rev. Robert Innes, Dr. J. Murray Jordan and Mary W., daughter of J. K. Caldwell.

KERSHAW—WEBSTER.—In Bethel, Vt., August 14, 1883, by the Rev. E. Gerry, Dr. Charles A. Kershaw and Sarah I. Webster, both of Lawrence, Mass.

POLAND—COOKE.—At St. Mark's Episcopal Church, on Thursday evening, August 16, 1883, by the Rev. H. M. G. Huff, Dr. S. C. Poland, of Xenia, Ohio, and Miss Lottie Cooke, of Philadelphia.

DEATHS.

BARNES.—In Claremont, Vt., August 17, 1883, Edward F. Barnes, M. D., aged thirty-three years.

EMERY.—Near Loveland, O., Sunday, September 2, 1883, Dr. John P. Emery, aged seventy-two years.

GUSTIN.—In Chelsea, Vt., September 7, 1883, Dr. S. Gustin aged seventy-five years.